

Xway

User Guide

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Introduction

About Xway

Xway is our next-generation program for visual web design. It is an entirely new 64-bit application that has been written using modern development tools. Xway will run on Apple's latest version of macOS.

The design philosophy behind Xway is *Like Freeway but better*. Xway is inspired by Freeway, but we have redesigned it to reflect the fact that the Web is different to how it was when Freeway was first written (over twenty years ago).

Xway can be used to create modern flexible websites that display on a range of devices (phones, tablets, computers) without the need to write code. Xway can import existing Freeway documents.

Differences between Xway and Freeway

Visual design

Xway displays pages that closely match how they are displayed in browsers.

Flexible layout

Pages are flexible by default, and the layout view can be resized so that pages can be viewed (and edited) at different sizes.

All layout is CSS layout, and boxes default to relative position (inflow layout) rather than absolute position. Inflow boxes are positioned in relation to other boxes, and they are also flexible by default, so they are more suited to flexible layout than absolute boxes ("layers" in Freeway).

Note: The fact that boxes default to being inflow is also a reason why they are inserted rather than drawn in Xway. Freeway allows you to draw inflow boxes, but its drawing behavior for inflow boxes is not intuitive. Xway (unlike Freeway) allows inflow boxes to be converted into absolute boxes, and vice versa.

Data model

Xway's data model is based on HTML and CSS. By contrast, Freeway's data model is essentially a DTP model that is translated (with some difficulty) into HTML and CSS.

Page structure

In Xway, as in HTML, structure is primary and style is secondary. Styles can be applied to elements, but Xway does not use styles to create structure. You can change the style of a page independently of its structure. A good way of doing this is to use default styles.

Styles

Xway styles are based on CSS styles, rather than on DTP styles that are then converted into CSS styles. Styles follow CSS inheritance rules, so that if a font size is applied to a box, that size will also be inherited by elements that are within the box.

Styling can be applied by creating default styles: you can define the default style for any paragraph (or heading or other element) that is on any page within the document, or on a particular page, or within a box. You can also apply individual styles to particular elements (e.g. change the font size of an individual paragraph or span).

Graphic boxes

Xway does not have separate graphic boxes or graphic text. Graphics can be added to a page, but there is no such thing as an empty graphic box.

Measurements

Xway supports most types of CSS measurement. You can define the size of boxes and text in pixels, or points, or percentages, or ems, or millimeters, or almost any other measurement that CSS uses.

Opacity

Xway has full support for opacity, including RGBA colors.

Z-index

Xway has full support for using z-index to control the front-to-back order of elements.

Flexbox

Xway supports Flexbox (CSS Flexible Box) layout.

Unlimited undo

Almost anything that you do in Xway can be undone (and redone) multiple times.

Versions

You can revert to previous saved versions of a document.

Missing features

There are some features that Freeway has that are missing in Xway. Some of these are features that we have discarded (table layout, frames), but others are features that have not yet been implemented. An incomplete list of features that have not yet been implemented is:

- Actions
- Floated boxes
- Forms and form controls
- Tables

System requirements

Xway should run on any Mac with macOS 10.14 (Mojave) or later.

Help and support

Choose Support and Community from the Help menu for support in using Xway. This links to our Xway discussion forum, where you can get help from us and from other Xway users.

The discussion forum is also a place where you can discuss Xway and provide feedback.

Updates

Choose **Check for Updates** from the **Xway** menu to check for updates, and to install an updated version of Xway if one is available.

Choose **Automatically Check for Updates** from the **Xway** menu if you want Xway to automatically check for updates.

Templates

An easy way to create a responsive website that will adapt to different screen sizes (phones, tablets, computers) is to use a template. For information on installing and using templates, see [Appendix 2: Templates](#).

Documentation

Choose **Xway User Guide** from the **Help** menu to view this manual on screen.

Choose **Readme**, **Release Notes**, or **Acknowledgments** from the **Help** menu to display the Readme file, Xway release notes, or acknowledgments.

Tutorials

A good way to become familiar with Xway is to work through the introductory *Xway Tutorial*. Choose **Xway Resources** from the **Help** menu to go to the **Xway Resources** section of our website, and click on **Tutorials**, followed by **Download the Xway tutorial** on the **Tutorials** page. This takes you through the steps for creating a simple website.

The *Xway Tutorial* is the first in a series of tutorials. The next tutorials in this series are the *Xway Menu Tutorial*, which introduces navigation menus, and the *Xway Flexbox Tutorial*, which introduces flexbox layout. All these tutorials, and the documents they create, are available from our website.

There are also short tutorials (tagged “tutorial”) in the Xway discussion forum (see [Help and support](#), above).

Video tutorials

Video versions of the Xway tutorials can be found on our [Tutorials](#) page.

About this manual

This is a reference manual, which provides detailed information about Xway functionality.

If you are reading the manual on screen, you can navigate around it by clicking on items within the Table of Contents, or by clicking on cross-references in the text. You can also navigate back to your starting place using the **Back** command (normal shortcut: ⌘[). Use the **Search** command in your PDF viewer to find items within the Table of Contents and elsewhere.

Typographical conventions

This manual uses a different font to identify words and phrases that represent user-interface items or keyboard shortcuts. Examples include: the **Copy** command in the **Edit** menu and its associated keyboard shortcut ⌘C.

In this example the symbol ⌘ represents the **Command** key, which is normally next to the space bar on keyboards. This is a modifier key, which you hold down while pressing the following key (C). Modifier and other keyboard symbols include:

- ⌘ The **Command** key, also labelled as **cmd**
- ⌥ The **Option** key, also labelled as **alt**
- ^ The **Control** key, also labelled as **ctrl**
- ⇧ The **Shift** key
- Fn The **Function** key
- ⌫ The **Escape** key, usually labelled as **esc**
- ◀ The **Left-arrow** key
- ▶ The **Right-arrow** key
- ▲ The **Up-arrow** key
- ▼ The **Down-arrow** key

Chapter 1: Documents

Working with documents

Options for managing documents can be found in the File menu. These are standard options that behave the same way in most Mac programs.

Creating a new document

Choose New from the File menu (or use the keyboard shortcut ⌘N) to create a new document.

Creating a new document from a template

Choose New from Template from the File menu (shortcut: ⌘⇧N) to create a new document from a template. Xway displays a file dialog that allows you to choose a template to use for the new document. Xway templates have an xwTemplate extension.

The first time you create a new document from a template, Xway may ask for permission to access resources in your templates folder. You can do this by choosing OK in the explanatory dialog, and then choosing the default (Access) button in the file dialog that Xway displays afterwards. You shouldn't need to do this on subsequent occasions, so long as you keep all your templates within the same folder.

See [Appendix 2: Templates](#) for general information on Xway templates.

Opening an existing document

Choose Open from the File menu (shortcut: ⌘O) to open an existing document. Alternatively, choose Open Recent from the File menu to open a recently opened document.

Xway can also open Freeway documents. See [Appendix 3: Importing a Freeway website](#).

Closing and saving documents

Choose **Close** from the **File** menu (shortcut: ⌘W) to close a document. Xway will prompt you if you have unsaved changes. To close all documents, hold down the **Option** key and choose **Close All** from the **File** menu (shortcut: ⌘⌥W or ⌘⌥⌘W if you are using tabs). An alternative way of closing a document is to click on the red button at the top left of the window. If a window contains several tabs, choose **Close Tab** (shortcut: ⌘W) to close the document that is currently displayed. You can also close tabs by clicking on the × icon on the left of a tab.

Choose **Save** from the **File** menu (shortcut: ⌘S) to save a document. If you have not previously saved this document, Xway will display a dialog asking you for a file name and a location to save the document.

Like most modern Mac programs, Xway automatically saves any documents that you are working on, so there is no need for you to keep saving manually. However, saving a document manually creates a “version” of the document. You can revert to previous versions using the **Revert** command (see [Reverting a document](#), below).

Duplicating documents

Choose **Duplicate** from the **File** menu (shortcut: ⌥⌘S) to duplicate the current document. To save the current document under a new name, hold down the **Option** key and choose **Save As** (shortcut: ⌘⌥⌘S) from the **File** menu.

Renaming a document

Choose **Rename** from the **File** menu to rename a document. You can also rename a document by clicking on its name in the title bar of the window and typing a new name in the popup dialog.

Moving a document

Choose **Move To** from the **File** menu to move a document to a different location. You can also move a document by clicking on its name in the title bar of the window and choosing a new location in the popup dialog.

Reverting a document

Choose **Revert To** from the **File** menu if you wish to revert to an earlier version of a document. You can easily revert to the last saved version, or the last opened version, or you can choose **Browse All Versions** to revert to any previous version.

Fixing document problems

Choose **Check Document** from the **File** menu if you wish to check for document problems. This checks for document problems that might have occurred (see below) and fixes them automatically. The **Check Document** dialog displays the names of pages and boxes where problems were found and fixed. If Xway fixed problems, it's possible to undo these changes by choosing **Undo Fix Document** from the **Edit** menu. One reason to do this (temporarily) might be if you want to investigate what changes were made. To do this, you could copy the names of pages and boxes from the **Check Document** dialog and paste them into a text document or note for reference, then switch to each page in turn and look at Xway's **HTML** view while undoing and redoing.

Nested paragraphs

Xway 0.8 sometimes created nested paragraphs or headings. This shouldn't happen, and it's not allowed in HTML (except for lists and list items). This shouldn't happen with more recent versions of Xway. **Check Document** fixes this problem.

Nested links

Older versions of Xway allowed links to be pasted within other links. This isn't allowed in HTML (nested links are ignored by browsers). **Check Document** fixes this problem, either by removing nested links, or by removing the outer link if it is empty.

Deeply nested spans

Freeway documents may contain deeply nested (redundant) spans. This can make it impossible to reopen an imported document after it has been saved. **Check Document** fixes this problem.

Publishing

Publishing a document

Choose **Publish** from the **File** menu (shortcut: ⌘P) to publish a document. This publishes the document into a **Site** folder that is within the document. Xway outputs HTML5 pages in a readable indented format (using 3-space indents).

Graphics and other resources apart from CSS and JavaScript files are published into a **resources** folder within the **Site** folder. CSS and JavaScript files are published into **css** and **scripts** folders within the **Site** folder. Xway ensures that resource names are unique.

Xway keeps track of published HTML and resource files, and deletes them when they are no longer needed.

Previewing

Choose **Preview** from the **File** menu (shortcut: ⌘B) to publish a site and preview it in your default web browser.

You can also preview single pages by choosing **Web Preview** (shortcut: ⌘B) from the **View** menu, or by clicking on the **Web Preview** icon in the **Toolbar**.

Note: If the current page is a master page, Xway previews the first site page that derives from this master page (and does not have publishing turned off). Master pages cannot be previewed directly, because they are not published.

Site folder

The **Site** folder is a folder that contains the pages and resources that make up a website. Xway automatically creates a **Site** folder within the document package (every document has its own **Site** folder).

Choose **Empty Site Folder** from the **File** menu if you want to delete the contents of the **Site** folder. You might do this if you wish to reduce the size of a document before sharing it (the files will be recreated next time the document is published). Emptying a **Site** folder before publishing is also a way to force everything to be republished (similar to Freeway's **Publish Everything** command).

Exporting a site

Choose **Export Site** from the **File** menu (shortcut: `⌘X`) to export a site. This duplicates the contents of the **Site** folder to an external folder. Xway publishes a document before exporting it, ensuring that the export folder is up-to-date.

If you have previously exported your site, Xway will update the export folder that was used on that occasion. Otherwise, it will display a file dialog that allows you to choose or create an export folder. If you create a new folder, or choose an existing empty folder, Xway will use that as the export folder. If you choose a folder that is not empty, Xway will create an export folder called “Site” (or “Site 2” etc.) within this folder.

Choose **Export Site To** from the **File** menu if you want to choose a different export folder.

Choose **Show Export Folder** from the **File** menu to open the current export folder in the Finder.

Uploading

Choose **Upload** from the **File** menu (shortcut: `⌘U`) to upload a site. This displays a dialog with upload settings. Choose **Upload** when you’re ready to upload (this will also save your current settings), or choose **Save** if you want to save your settings without uploading.

Xway publishes a site before uploading it, to ensure that it is up-to-date. During an upload, Xway synchronizes the online destination folder with the document’s internal **Site** folder: it copies new and changed files and folders from the **Site** folder to the online destination, and it may also delete online files and folders that do not exist in the **Site** folder. You can prevent Xway from deleting files and folders that you don’t want to be deleted (see below).

Xway allows you to upload to multiple destinations, such as a preview destination, which you can use for testing, and a main (public) destination.

Before uploading (important)

Before you upload to a destination for the first time:

1. Check that you are uploading to the correct destination. Don't upload to the root directory if your web provider has specified an html or web folder (such as `www` or `public_html`), or Xway may delete files and folders that are in the root folder—including the folder that you should upload to. See [Directory](#) (in *Upload Settings*, below) for more information.
2. If you have selected the **Delete destination files and folders** checkbox, we recommend that you check to see if there are any files or folders in your online destination that you don't want to be deleted. See [Preventing files and folders from being deleted](#) (in *Upload Settings*, below) for more information. To avoid problems, we suggest leaving this checkbox unselected until you have compiled a list of files and folders that you don't want to be deleted, and added them to the **Don't delete** list.

Upload settings

Protocol

Use the Protocol popup to choose an upload method. Choose a secure method if possible: either FTP with SSL/TLS or SFTP (SSH File Transfer) depending on which method is supported by your web provider. Avoid using plain (insecure) FTP unless there is no alternative, and consider switching to a different web provider if that is the case.

Server

This is the name or IP address of the server (or “host”) that you are uploading to. Your web provider should have provided you with this information.

Port

This is the port number that is used to communicate with the server. Unless your web provider has specified a non-default port number, you can leave this field blank. Default port numbers are 21 for FTP with SSL/TLS and 22 for SFTP.

Directory

This is the directory (or “path”) that you should upload to. Your web provider should have provided you with this information. Common directory names include `public_html` and `www`. Alternatively, you might need to upload to a root directory, in which case you can leave this field blank.

User Name

Your web provider should have provided you with a user name that allows you to log in to the upload server.

Password

Your web provider should have given you a password, or told you how to set one up.

Passwords are locked and hidden by default. Deselect the **Lock** checkbox if you want to change a password. Select **Show Password** (after unlocking) if you want to view a password.

Note: Passwords are stored in the macOS keychain. They are not saved in documents. Xway checks that a new password is valid before overwriting an existing keychain password.

FTP Mode

This popup is displayed if you are using FTP or FTPS as the upload method.

This allows you to choose whether to use **active** or **passive** FTP. In most cases, you can leave it at its default **Automatic** setting, in which case Xway will determine which mode it should use.

Prefer high-resolution date comparisons

Select this checkbox if you want Xway to compare online modification dates to the nearest second. This may require extra information to be transferred, and will often result in slower uploads. We recommend leaving this checkbox unselected in most cases.

Preventing files and folders from being deleted

Uploading a site synchronizes your document’s **Site** folder with an online destination: new files and folders are added, changed files are overwritten,

and files and folders that are not in your local Site folder *may* be deleted. If you have files and folders that have been added separately, either by you or by your web provider, you can prevent them from being deleted.

There are two ways to do this:

1. If the **Delete destination files and folders** checkbox is unselected, Xway will not delete files and folders from the destination server. This is the safest option for beginners, and it matches the default behavior of synchronize commands in Cyberduck and Transmit. There are some downsides to this behavior. Anything that you delete from your local site will remain on the server (not good if you deleted it for a reason). If you rename files and folders within Xway, they will also remain on the server under their original name.
2. If the **Delete destination files and folders** checkbox is selected, Xway *will* delete files and folders that are not in your local Site folder—but you can add the names of files and folders that shouldn't be deleted to the **Don't delete** section, which Xway displays beneath the checkbox (when it is selected). Xway includes `cgi-bin` (a scripts folder) and `robots.txt` by default. In addition to files and folders that are listed in this section, Xway automatically protects any files or folders that begin with a dot.

Note: Files that begin with a dot are typically used as configuration files (e.g. `.htaccess`), and are sometimes referred to as invisible files because they are not normally shown in directory listings.

*Note: You can also use regular expressions in the **Don't delete** section to specify patterns. For example, `Regex("^.")` is used internally by Xway to protect files and folders that begin with a dot. You don't need to add this because it's built into Xway, but you can use the same syntax for other patterns: `Regex([expression])` where `[expression]` is a regular expression (in quotes). For information on regular expressions, see [Regex Tutorial - How to write Regular Expressions?](#)*

Add the names of files or folders to the **Don't delete** list if (1) they have been added by your web provider, or (2) you have uploaded them separately (using a third-party upload program) and they are not part of your local Site folder.

If, for example, you have uploaded a folder containing images or videos, add the name of that folder to the list.

Be careful to avoid name conflicts. Files and folders that are listed in this section will not be deleted, but they will be overwritten if there is a file or folder in Xway that has the same name. If you upload a separate folder containing images, don't give it the same name as a folder that already exists in your Site folder (such as `resources`, or `scripts`, or `css`). If you have already uploaded a `videos` folder, don't create a `videos` folder in Xway.

If you're not sure what files and folders are in your destination folder, you can use a third-party upload application to view this folder, and copy/paste the names of files and folders that you don't want to be deleted into the **Don't delete** section. Alternatively, if you upload with the **Delete destination files and folders** checkbox *unselected*, Xway will list the names of files and folders that haven't been deleted at the end of the log file. If you click on **Copy Log** in the Upload window (see below), you can paste the log into a text editor (such as TextEdit), and use that to create a list of files and folders (directories) that you want to protect. Look for "2. Directory names" and "3. File names" near the bottom of the log file, and copy/paste the names of files and folders from these lists into the **Don't delete** section if you want to protect them. You can only paste one name at a time. Generally, you don't want to protect files and folders that Xway generates (e.g. `html` and resource files, or `css`, `resources`, and `scripts` folders).

Presets

The popup at the top of the Upload dialog can be used to switch between different upload configurations. This allows you to upload your site to different online locations. You might want to view your site at a preview location before you upload it to its main location: see [Uploading to a preview location](#) (below).

Creating a preset

To create a new empty preset, choose **Add Preset** from the presets popup. Alternatively, to duplicate the current preset, choose **Duplicate Preset**.

Deleting a preset

You can delete a preset by choosing **Edit Presets** from the presets popup. Select the preset you wish to delete, and press **Backspace** or click on the minus button at the bottom of the **Edit Presets** dialog. If there is only one preset, Xway will not allow you to delete it.

Renaming a preset

The **Edit Presets** dialog also allows you to rename presets. Select the preset you wish to rename, and press **Return** (or click on it when it is already selected) to start editing it. Presets are given default names, based on the upload method, server, and directory, but you might prefer to use shorter and more obvious names. To revert to a default name, delete any name you previously entered.

Uploading to a preview location

If you would like to test your site online before you make it public, you can do this by uploading it to a preview location. One way to do this is to create a preset that will upload to a preview folder within your normal upload folder.

1. Use a third-party application (such as Cyberduck or Transmit) to create a preview folder within your normal upload folder. You could call it **preview** or **preview2749** or something similar.
2. Duplicate your default settings by choosing **Duplicate Preset** from the presets popup.
3. Add the name of the preview folder to the **Directory** field. If the **Directory** field is blank, enter **preview** (or whatever name you've chosen). If it already contains a directory name, append the name of the preview folder.
4. If you want to prevent the preview folder from being deleted when you do a normal upload (using your default preset), add it to the **Don't delete** section for your default settings.
5. You might want to rename your presets so they can be distinguished more easily (e.g. **Public** and **Preview**). You can use the **Edit Presets** dialog to do this (see [Renaming a preset](#), above).

Upload window

When a site is uploaded, Xway displays progress information in an Upload window. You can continue working on a document while it is being uploaded, but any changes that you make during this time will not be uploaded. You can also work on other documents. When an upload is finished, the Upload window shows whether it was successful.

If you have closed or hidden the Upload window, you can display it again by choosing Upload from the Window menu.

Cancelling an upload

You can cancel an upload by clicking on the stop button next to the progress bar.

Upload logs

Xway saves upload logs that record what happened during an upload. These may be useful if you encounter problems. To view the log for a single upload, click on the Copy Log button for that upload in the Upload window, and paste the copied log into a text editor (such as TextEdit). You can also export the logs of recent uploads by choosing Export Logs at the bottom of the Uploads window.

Note: Xway prunes upload logs to prevent them from using too much disk space.

Troubleshooting

If you have problems when you are uploading for the first time, check that you have entered your upload details correctly. Try using a third-party application to see if that is able to connect using the same details.

If you have successfully uploaded your site in the past, but are now having problems, it's worth using a third-party application to see if that is able to connect (without actually uploading anything). It's possible that there is a temporary problem with the upload server, or with your internet connection.

Uploading with another application

If you cannot upload from Xway for some reason, you can use a third-party upload application (such as Cyberduck or Transmit) to upload your site. To do

this, export your site (see [Exporting a site](#), above) and use an upload application to synchronize the export folder with your online folder.

Document structure

An Xway document is essentially a collection of pages and other resources. These are arranged in a tree-like structure. A root folder contains pages and other folders, and these folders also contain pages and folders. Pages contain boxes, and boxes may contain other boxes, in addition to text and other content. Text elements may also contain inline boxes, such as graphic boxes.

In a tree-like structure, we can say that an element that contains other elements is the parent of those elements, and they are its children. Child elements that have the same parent are siblings.

Document properties

The Document Inspector (leftmost tab in the Inspector panel) allows you to set document properties.

These include style properties that will be applied to pages that are within the current document. For example, you can set a page background color that will be used on all pages within a document, unless they have their own separate style.

See [Chapter 7: Styles](#) for a detailed discussion of styles.

Chapter 2: Windows

Window areas

Site panel

The left area of a window contains the **Site** panel, which lists pages and folders that are in the current document. This is similar to the **Site** panel in Freeway. It allows you to navigate between pages; to select folders, pages, and boxes; and to perform various actions such as adding, deleting, renaming, and duplicating elements.

Within the **Site** panel, selected elements are highlighted and the current page (which might or might not be selected) is drawn with a darker icon color.

Clicking within the **Site** panel transfers focus to the **Site** panel, so that arrow keys can be used to select the next or previous element, or to open and close elements that have a disclosure arrow. When the **Site** panel has active focus, selected elements are displayed with a colored (rather than gray) highlight. You can transfer focus back to the **Main** window area by clicking on it, or by pressing **Tab**. You can also press **Command-Return** to switch from the **Site** panel and start editing if a container box (such as a text box) is selected. This is a shortcut for pressing **Tab** followed by **Command-Return** and is similar to pressing **Return** in Freeway.

You can hide the **Site** panel by choosing **Hide Site Panel** (shortcut: **⌘S**) from the **View** menu, and you can show it again by choosing **Show Site Panel** (same shortcut).

Inspector panel

The right area of a window contains the **Inspector** panel. This is similar to the **Inspector** palette in Freeway, although it is arranged differently. It displays information about documents, pages, boxes (etc.) and allows you to change their properties.

The **Inspector** panel contains a number of tabbed views.

- The **Document Inspector** displays information about the current document. It allows you to define document styles (and other attributes) that are applied to each page in a document that does not have its own style (or other attributes).
- The **Page Inspector** displays information about the current page, or about the pages that are currently selected in the **Site** panel. You can view and edit information for multiple pages.
- The **Box Inspector** displays information about the current box—or boxes, since you can also view and edit information for multiple boxes.
- The **List Inspector** displays information about the current list (or lists).
- The **Paragraph Inspector** displays information about the current paragraph (or paragraphs). “Paragraph” in this sense includes any text block (headings and list items as well as normal paragraphs).
- The **Link Inspector** displays information about any links that are currently selected.
- The **Span Inspector** displays information about the current span. “Span” in this sense includes any inline text element (**span**, **emphasized**, **strong**, and so on.)

The **Inspector** panel contains collapsible sections, which are shown or hidden depending on context. Sections can be collapsed or expanded by clicking on the section title bar (holding down **Option** while clicking to show a section will also close other sections). The **Inspector** panel can be scrolled vertically if it contains more content than will fit in the window.

Sections within the **Inspector** panel are arranged so that HTML attributes are displayed before style properties, non-extended attributes/properties are displayed before extended attributes/properties, and non-default style properties are displayed before default style properties.

You can hide the **Inspector** panel by choosing **Hide Inspector Panel** (shortcut: **⌘+I**) from the **View** menu, and you can show it again by choosing **Show Inspector Panel** (same shortcut).

Main area

The main area of a window (between the Site panel and the Inspector panel) displays different views, including a Page view, a Web Preview view, an HTML view, a Colors view (similar to Edit Colors in Freeway), a Fonts view (similar to Edit Font Sets in Freeway), and a Resources view (similar to Edit Resources in Freeway). The Page view is flexible: you can resize it by moving the divider between it and the Inspector panel (this allows you to see how a page will be displayed on different sized devices).

Toolbar

Xway displays a toolbar near the top of the window. This contains tools that allow you to perform common operations. You can hide the toolbar by choosing Hide Toolbar (shortcut: $\text{⌘}T$) from the View menu, and you can show it again by choosing Show Toolbar (same shortcut). You can also customize the toolbar by choosing Customize Toolbar from the View menu.

Title bar

The top of a window contains a title bar which displays the title of the current document. If you click on this, it displays a pop-up dialog that allows you to rename the current document or move it to a different location.

The title bar also displays information about whether a document has been edited since it was last saved.

At the left of the title bar are three standard window buttons: a red button which closes the window, an amber button which minimizes it, and a green button that switches into full-screen mode (or zooms the window to maximum size if you hold down the Option key).

Full-screen mode

If you wish to use Xway in full-screen mode, choose Enter Full Screen (shortcut: $\text{⌘}F$ or $\text{Fn}F$) from the View menu or click on the green button at the top left of the window. This resizes the current window so that it takes up the whole of the screen, with the menu bar hidden unless you move the mouse to the top of the screen. You can exit from full-screen mode by choosing Exit Full Screen (same shortcuts: $\text{⌘}F$ or $\text{Fn}F$) from the View menu after moving the

mouse to the top of the screen, or by pressing the **Escape** key, or by clicking a second time on the green window button (after moving the mouse to the top of the screen).

Managing windows

Minimizing windows

Choose **Minimize** from the **Window** window (shortcut: **⌘M**) to minimize windows. A minimized window is shrunk and placed in the **Dock**. An alternative way to minimize windows is to click on the amber button near the top left of the window.

Zooming windows

Choose **Zoom** from the **Window** menu to zoom windows. Zooming a window sets it to its maximum size, or returns it to its previous size if you choose it a second time. An alternative way to zoom windows is to hold down the **Option** key and click on the green button near the top left of the window.

Switching windows

You can switch between windows by choosing them from the **Window** menu. You can also cycle between windows by pressing **⌘~**.

Switching tabs

If a window contains several tabs, you can switch between them by pressing **⌘⇧T** (**Control-Tab**) to move to the next tab or **⌘⇧T** (**Control-Shift-Tab**) to move to the previous tab.

Chapter 3: Pages and folders

Working with pages and folders

You can manage pages and folders using the Site panel on the left of the window, or by choosing options from the Insert and Go menus.

Creating a new page

You can create a new page by choosing **New Page** (shortcut: ⌘N) from the **Page** menu. If a folder is selected in the Site area of the Site panel, the new page will be added within this folder. Otherwise, it is appended to pages or folders that are in the current folder—the folder that contains any currently selected items, or that contains the current page, or the root Site folder.

You can also add a new page by control-clicking (or right-clicking) on a folder in the Site section of the Site panel and choosing **New Page** from the contextual menu. This will add a new page to the folder that you clicked on.

Creating a new folder

You can create a new folder by choosing **New Folder** from the **Page** menu. If a folder is selected in the Site panel, the new folder will be added within this folder. Otherwise, it is appended to pages or folders that are in the current folder—the folder that contains any currently selected items, or that contains the current page, or the root Site folder. The **New Folder** dialog asks you to choose a name for the folder. Folder names are similar to file names (they can contain alphanumeric characters, plus hyphen, underscore, and tilde) except that alphanumeric characters can also be uppercase.

You can also add a new folder by control-clicking (or right-clicking) on a folder in the Site panel and choosing **New Folder** from the contextual menu. This will add a new folder to the folder that you clicked on.

Reordering pages and folders

You can reorder pages and folders by dragging them within the Site panel.

Note: Folder names and page file names must be unique. If you drag a folder or page into another folder that already contains a folder or page with the same name, Xway will rename the dragged folder so that it is unique.

Renaming pages and folders

You can rename a page or folder by clicking on its name when it is already selected in the Site panel.

You can also rename a page or folder by control-clicking (or right-clicking) on it in the Site panel, and choosing **Rename** from the contextual menu.

You can also rename a page (or multiple pages) using the **Title** field in the **Page Inspector**.

Deleting pages and folders

You can delete pages and folders by selecting them in the Site panel and choosing **Delete** from the **Edit** menu (or pressing **Backspace**).

You can also delete a page or folder by control-clicking (or right-clicking) on it in the Site panel, and choosing **Delete** from the contextual menu.

Copying and pasting pages and folders

You can copy pages and folders by selecting them in the Site panel and choosing **Copy** (or **Cut**) from the **Edit** menu (shortcuts: **⌘C** or **⌘X**). Alternatively, control-click (or right-click) on a page or folder and choose **Copy** (or **Cut**) from the contextual menu. This will copy (or cut) the page or folder you clicked on (or any selected pages/folders if you click on a selected page or folder).

You can paste pages and folders within the Site panel:

1. Choose **Paste** from the **Edit** menu (shortcut: **⌘V**). If a folder is selected in the Site panel, the pages and/or folders will be pasted after other pages and folders within this folder. Otherwise, they are pasted after other pages and folders within the current folder—the folder that contains any currently selected items, or that contains the current page, or the root Site folder.

2. Alternatively, control-click (or right-click) on a folder and choose **Paste** from the contextual menu. The pages and/or folders will be pasted into the folder you clicked on.

Pages and folders can be pasted within the same document, or between documents.

Duplicating pages and folders

You can duplicate one or more pages and/or folders by selecting them in the Site panel and choosing **Duplicate Selection** from the Edit menu (shortcut: ⌘D) or by choosing **Duplicate** from a contextual menu.

Navigating pages

Navigating via the Site panel

Click on a page within the Site panel to select it as the current page.

Navigating with Next Page and Previous Page

Choose **Next Page** (shortcut: ⌘⌘]) or **Previous Page** (shortcut: ⌘⌘[) from the Go menu to navigate to the next or previous page.

Navigating with Go Back and Go Forward

Choose **Back** (shortcut: ⌘[) or **Forward** (shortcut: ⌘]) from the Go menu (or click on the **Back** or **Forward** button in the Toolbar) to go backwards or forwards in page (and view) history. This is similar to **Go Back/Forward** in browsers and in Freeway.

Adding content

In Xway, pages contain boxes, and boxes contain content. General-purpose container boxes contain text and other content. Graphic (or resource) boxes contain graphic (or other resource) content. In contrast to Freeway, resource boxes cannot be emptied of their content: it is not possible to have an empty resource box.

You can add content to a page by choosing an item (**Box**, **Graphic**, etc.) from the Insert menu, or by using one of the Insert buttons in the Toolbar. **Insert Box** inserts a container box that can contain text and other content. Every page

contains a root box (page div) in which other boxes are inserted. (Unlike in Freeway, the page div can be renamed using the Name/ID field in the Page Inspector.) You can also type content directly into any text-container box, including the page div.

Text and graphics that have been copied from other applications can be pasted into Xway. You can also copy and paste text, boxes, pages, and folders within Xway, and copy text from Xway to other applications.

Selecting content

You can select boxes and other content that you wish to edit. Selected boxes are drawn with resize handles. These are disabled (and drawn in light gray) if a box is not resizable in a particular direction.

Selecting content with the mouse

You can select boxes by clicking on them in the Page view. This will normally deselect the previously selected item or items, but you can select multiple items by holding down the Shift or Command key while clicking.

You can select a range of text by clicking and dragging the mouse.

Selecting content with arrow keys

You can also select content using arrow keys. These move the current insertion point within text, or select a box that is before the current insertion point. You can hold the Shift key while pressing an arrow key to extend selection.

Selecting parents, children, and siblings

Page content is arranged in a tree structure (resembling the structure of HTML). Boxes and elements that are on a page are the children of other elements. The text that is within a box is a child (or descendant) of the box, and that box is either a child of another box, or else it is a special box known as the page div and is a child of the page. There is one page div on every page. Another way to think about this is to say that any element (box, paragraph, or span) that contains content is the parent (or ancestor) of that content.

You can select the parent of any element by choosing **Select Parent** (shortcut: `⌘⌘▲`) from the **Edit** menu, or by clicking on the **Select Parent** button in the **Toolbar**. Similarly, you can select the first child of any element by choosing **Select First Child** (shortcut: `⌘⌘▼`), and you can select the next or previous sibling of any element by choosing **Select Next Sibling** (shortcut: `⌘⌘▶`) or **Select Previous Sibling** (shortcut: `⌘⌘◀`).

If you place a text cursor in some text, and choose **Select Parent** repeatedly, Xway will select the span or paragraph that contains the cursor, the box that contains the paragraph, and so on until you have selected the page itself.

Selecting all content

Choose **Select All** from the **Edit** menu (shortcut: `⌘A`) to select all text within a box (if there is a text selection), or all boxes that are siblings of a currently selected element, or all boxes that are children of the page div if there is no selection (or the page div is selected).

Selecting content in the Site panel

You can select boxes (and other elements) by clicking on them in the **Site** panel.

Deleting content

You can delete selected content by pressing **Backspace** or by choosing **Delete** from the **Edit** menu.

You can also delete elements by choosing **Delete** from a contextual menu in the **Site** panel.

Undo and redo

Undoing changes

Choose **Undo** from the **Edit** menu (shortcut: `⌘Z`) if you wish to undo changes that you have made. Almost anything that you do in Xway can be undone, and you can undo multiple changes by choosing **Undo** repeatedly. The title of the **Undo** option normally identifies the operation that can be undone: if you

delete a page, it will say **Undo Delete Page**; if you insert a box it will say **Undo Insert Box** (and so on).

Redoing changes

Choose **Redo** from the **Edit** menu (shortcut: ⌘⌘Z) if you wish to redo an operation that you have previously undone. As with **Undo**, the title of the **Redo** option normally identifies the operation that can be redone.

Page properties

Page properties are displayed in the **Page Inspector**. You can edit properties that are applied to the current page (the page that is displayed in the **Page** view). You can also edit properties for multiple pages by selecting more than one page in the **Site** panel

*Note: If multiple pages are selected in the **Site** panel, there is no current page and the **Page** view is blank to avoid any confusion.*

Title

The title of a page is displayed by browsers as the title of a window or tab. You can enter a title in the **Title** field of the **Page Inspector**. If a page is untitled, a browser will normally identify it by its file name, while Xway will identify it by its position within the document: the first page in a document will be labelled “Page 1” in the **Site** panel if it doesn’t have a title.

File name

The file name of a page is the name that will be used for its HTML file. Xway uses the title of a page to create an automatic file name, which also changes if the title is changed.

You can also enter your own chosen file name for a page, by typing into the **File Name** field of the **Page Inspector**. If you want to revert to using automatic file names, you can do so by deleting the file name that you have used.

Xway restricts file names to lowercase alphanumeric characters, plus hyphen, underscore, and tilde, and follows the common practice of replacing spaces with hyphens. Xway also trims leading and trailing spaces from file names.

Note: File-name conventions are similar to Freeway, except that Freeway allows file names to have internal spaces and mixed case. E.g. “ Hello World .html” is converted to “Hello World .html” in Freeway and “hello-world.html” in Xway. Disallowing spaces reduces the need for HTML escaping: “Hello%20%20World%20%20.html” etc.

Within any folder (apart from master-page folders) there should be a page that has a file name which indicates that it is an index page (normally index.html). This is the page that browsers will display when a URL does not contain a file name. For example, <https://www.apple.com> is equivalent to <https://www.apple.com/index.html>. If a folder does not already contain an index page, Xway assigns index.html as the file name of the next page that is added to that folder.

Language

You can set the language of a page using the Page Inspector. You can also set the default language for all pages in a document using the Document Inspector. See [Language](#) (page 78) for more information.

Extended HTML attributes

The Extended HTML attributes section of the Page Inspector allows you to add HTML attributes that are not otherwise supported by Xway. See [Extended page attributes](#) (page 155) for more information.

Non-publishing pages

You can set a page to not publish by turning off the Publish checkbox in the Page Inspector.

You might want to turn off publish for old pages that you don't wish to delete yet, or for new pages that aren't ready to publish. Note that non-publishing pages can't be previewed, and if you link to a non-publishing page, that link will be broken.

Note: When a non-publishing page is duplicated, Xway turns publish back on for the duplicated page. You can turn it off again if you wish.

Style properties

The **Page Inspector** also allows you to set style properties for a page, such as its background, or the style of text, or the default style of particular elements. If you define a default style for a heading element (for example), that style will be used wherever the heading occurs on the page. Styles are discussed in greater detail in [Chapter 7: Styles](#).

You can also make style changes that will apply to every page within a document that does not have its own style (or a master page with its own style) instead of being limited to individual pages. Each document contains a document settings page, which contains the styles and default styles that are used for pages (and page divs) within the document. You can configure these styles using the **Document Inspector**.

Favicons

The **Favicons** and **Document: Favicons** sections of the **Page Inspector** and **Document Inspector** allow you to set icons that are used to represent your page in browsers etc. See [Favicons](#) (page 131) for more information.

Document, master, and page properties

Xway allows you to set page properties (styles, default styles, attributes, favicons, and so on) on a number of levels.

Document properties are applied to every page that does not have its own properties (style, attributes, and so on), and does not derive from a master page that has its own properties. These are set in the **Document Inspector**.

Master properties are applied to every page that derives from a particular master page and does not have its own properties. These are set in the **Page Inspector** when a master page is selected.

Page properties are applied to a specific page (or master page). If you change the style of a page (using the **Page Inspector**), that page's style becomes detached from its master page's style (if it has a master page) or from the document style (if it doesn't). The same is true for other properties, including default styles, attributes, favicons, meta tags, and markup.

You can select the **Use Document Style** checkbox if you wish to reattach the style of a page that doesn't have a master page, or the **Use Master Style** checkbox if you wish to reattach the style of a page that does have a master page. Other checkboxes allow you to reattach page attributes, default styles, favicons, meta tags, and markup.

For more information on master pages, see [Chapter 6: Master pages](#).

Previewing pages

You can preview the current page by choosing **Web Preview** from the **View** menu (shortcut **⌘B**), or by clicking on the **Web Preview** icon in the **Toolbar**.

Navigating to other pages (internal or external) via links is disabled within the **Web** view, but navigating to other locations on the same page (e.g. when an **Item** location is selected in the **Link** dialog or **Link Inspector**) is allowed. You can switch pages in the **Site** panel while the **Web** view is displayed. The **Web** view is updated whenever commands that affect the appearance of a page are undone or redone. You can also force it to be updated by choosing **Reload Page** from the **View** menu.

*Note: If you switch to Xway's **Web Preview** from a master page, Xway switches temporarily to the first site page that derives from this master page and does not have publishing turned off (since master pages are never published and cannot be previewed directly). It also indicates that this has happened by using a darkened (current page) icon for this page in the **Site** panel.*

Viewing HTML output

You can view the HTML output for the current page by choosing **HTML** from the **View** menu (shortcut **⌘H**), or by clicking on the **HTML** icon in the **Toolbar**.

You can switch pages in the **Site** panel while the **HTML** view is displayed. The **HTML** view is updated whenever commands that affect the HTML output of a page are undone or redone. You can also force it to be updated by choosing **Reload Page** from the **View** menu.

*Note: The **HTML** view is read-only, but text can be selected and copied.*

*Note: If you switch to Xway's **HTML** view from a master page, Xway switches temporarily to the first site page that derives from this master page and does not have publishing turned off. It also indicates that this has happened by using a darkened (current page) icon for this page in the **Site** panel.*

Chapter 4: Boxes

Working with boxes

Pages contain boxes. All pages contain a single root box (known as the page div), which in turn contains other boxes and other content.

There are two main kinds of box in Xway (and in HTML):

1. Container boxes are general-purpose boxes that contain text or other content (including other boxes). These are block elements in HTML terminology. They may contain text and other block elements, but they cannot be inserted within text elements.
2. Content boxes are boxes that contain a specific type of content. For example, a graphic box contains a graphic, while a video box contains a video, and a form-control box contains a form control. In contrast to container boxes, content boxes cannot be separated from their content—it is not possible to have an empty graphic box (a graphic box without a graphic) or an empty video box (a video box without a video). Content boxes are inline elements in HTML terminology. They may be inserted within text elements.

Container boxes

You can insert a container box by choosing **Box** from the **Insert** menu, or by clicking on the **Insert Box** button in the **Toolbar**.

Container boxes are inserted after the current selection, or after other content on the page if there is no selection. More precisely:

1. If there is no selection, or the page div is selected, Xway will insert a box after other content in the page div.
2. If one or more boxes are selected, Xway will insert a box after the last selected box.
3. If there is a text selection, Xway will insert a box after the last paragraph in the text selection. For example, if there is a text cursor or

text selection within a paragraph, Xway will insert a box after that paragraph.

Content boxes

You can insert a graphic by choosing **Graphic** (or **Resource**) from the **Insert** menu, or by clicking on the **Insert Graphic** button in the **Toolbar**. You can also insert other types of content, such as videos or audio files, by choosing the appropriate content type from the **Insert** menu or from the **Toolbar**.

Content boxes (unlike container boxes) are inline elements. You can insert a graphic (or video or audio) at the current text insertion point.

Copying and pasting boxes

You can copy one or more boxes by selecting them and choosing **Copy** (or **Cut**) from the **Edit** menu (shortcuts: ⌘C, ⌘X) or from a contextual menu in the **Site** panel.

To paste boxes on a page:

1. Choose **Paste** from the **Edit** menu (shortcut ⌘V). The box (or boxes) will be pasted at or after the current page selection—see [Container boxes](#) and [Content boxes](#) (above) for more information on where boxes are inserted.
2. Alternatively, control-click (or right-click) on a page or container box in the **Site** panel, and choose **Paste** from the contextual menu. The box (or boxes) will be pasted into the page or box that you clicked on.

Boxes (like other content) can be copied and pasted within the same document or between documents.

Duplicating boxes

You can duplicate one or more boxes by selecting them and choosing **Duplicate Selection** from the **Edit** menu (shortcut: ⌘D) or by choosing **Duplicate** from a contextual menu in the **Site** panel.

Note: If an absolute-positioned box is duplicated, Xway offsets it by a small amount in order to provide visual feedback that the box has been duplicated.

You can also duplicate one or more boxes by dragging them while holding down the Option key.

Locking content

You can lock a box's content by selecting **Lock Content** in the **Content** section of the **Box Inspector**. This prevents you from inadvertently changing the content of a box: if you attempt to do this, Xway will display an alert saying that the box is locked and asking if you wish to unlock it.

You can also lock the content of any instance of a master box by selecting **Lock Instances** in the **Content** section of the **Box Inspector**. This automatically turns on **Lock Content** for instance boxes. You can unlock them individually if you wish.

*Note: If you have locked or unlocked an instance box, you can reattach it to a master box's **Lock Instances** setting by re-locking or re-unlocking it. (If **Lock Content** for an instance box is reset to match **Lock Instances** for its master box, Xway reattaches the setting so that it is controlled by the master setting.)*

Box Type

Container boxes default to being output as HTML divs, but it is often better to choose a different type. You can do this using the **Type** popup in the **Box Inspector**. Xway supports the same types of container box as Freeway:

Default type: div

Div is the default type. It conveys no information about the function of a box. Choosing a type that does convey functional information is often preferable (for accessibility and other reasons).

Main content: main

Main represents the main content area of a page, and excludes content that is repeated across other pages (such as navigation links, copyright information, and logos). There should not be more than one visible main element on a page (if more than one main element is present, the other instances should be hidden using the hidden attribute—not currently supported by Xway except as an extended attribute).

Sectioning types: article, aside, nav, section

Article represents self-contained content, such as a magazine article or blog post.

Aside represents tangential content, such as might be placed in a side bar or side box.

Nav is a navigation area that contains navigation links.

Section represents a section of a document. Sections should normally be identified by including a heading element as a child of the section element, or within a header element that is a child of the section element. Sections may contain child sections (subsections).

Headers and footers

A Header contains introductory content. Headers (and footers) should not be nested within other headers (or footers), but subsections may contain their own headers (and footers).

A Footer contains footer content.

Other container-box types: address, figure, figure caption

An Address contains contact information for a person, people, or organization. Text in an address box (or in a box that is a descendant of an address box) is italicized by default (in Xway and browsers) but this can be changed.

A Figure can be used to annotate graphics, diagrams, code listings etc.

A Figure Caption can be used to caption a figure.

Content-box types

Graphic boxes have an Image type, and video boxes have a Video type. It is not possible to change an image or video into some other type. Other types of content box include Audio and Iframe.

Note: The type of the page div cannot be changed, so the Type popup is hidden when the page div is selected. The Type popup is also hidden when multiple boxes that have incompatible types (e.g. container box and graphic box) are selected.

Box attributes

Box attributes are HTML attributes that are associated with a particular box. General attributes (that can be applied to any box type) include ID and Title.

ID

The ID of a box is used to label boxes on output (this is also used to associate particular styles with that box). Xway chooses default ID values, but you can use the Name/ID field in the **Box Inspector** to change these. ID values must be unique (within a page). Xway also restricts them to lowercase alphanumeric characters, plus hyphen and underscore. If you have entered a specific ID value, but wish to revert to having Xway choose ID values, you can simply delete the value that you entered. If you wish to do this for multiple boxes, Xway doesn't display a value that you can delete, but typing a single space will have the same effect.

Xway chooses default ID values to match different box types: divs are labelled *item1*, *item2*, etc. (as in Freeway), while other types are labelled to match their type. A main element is labelled *main*—if you find that a main item is labelled *main2* or *main3* check that you do not already have other main elements on the page. Other elements are labelled *article1* etc., *aside1* etc., *nav1* etc., *section1* etc., *header1* etc., *footer1* etc., *address1* etc., *figure1* etc., and *caption1* etc. Graphic and other resource boxes are generally named after the resource file name. You can change any of the default ID names to your own preferred names. Xway does not rename elements that have non-default names.

Note: Images and other resources may be given default ID labels (image1, video1 etc.) if they are pasted or if their file name does not contain valid ID characters.

Title

Box titles are displayed as help tags in browsers. You can use the Title field in the **Box Inspector** to assign titles.

Other attributes

The General (“Box”) section of the **Box Inspector** also displays attributes that are specific to a particular type of box, such as alt. text (for graphics).

Extended HTML attributes

The Extended HTML attributes section of the Box Inspector allows you to add HTML attributes that are not otherwise supported by Xway. See [Extended HTML attributes](#) (page 155) for more information.

Box styles

The position, size, and appearance of boxes are determined by their style properties.

Note: This section discusses the position and size of boxes that are in standard (text) containers. See [Chapter 16: Flexbox](#) for information on how boxes are sized and positioned within flex containers.

Box position

The most basic style property for boxes is position. This controls whether a box is part of the flow of text and other content (in which case it is an inflow box) or whether it is removed from normal flow.

Relative and absolute position

Container boxes default to being inflow (relative-positioned) boxes, but can be converted into absolute-positioned boxes (“layers” in Freeway) using the Position popup in the Box Inspector. You can also set boxes to have Sticky position (see below).

The reason that Xway uses relative position by default is because relative-positioned boxes are positioned relative to other content, and are also flexible (by default)—so they will adapt to the size and position of other elements on the page. Be careful using absolute-positioned boxes: an absolute layout that looks fine on one device may be jumbled together on another. There are specific cases in which an absolute box may be useful.

Xway (like Freeway) clears margin properties when an inflow item is converted into an absolute item, and also clears positioning offsets when an absolute item is converted into an inflow item.

Static (inline) position

Content boxes (such as graphic boxes) default to being inline: they can appear on the same line as other content and are positioned within that content. Content boxes can also be converted into absolute-positioned boxes. Technically, an inline box has **static** position (in CSS terminology), but Xway displays its position as **None** (it does not have an independent position).

Fixed position

It is also possible to define the position of a box as being **Fixed** in relation to the viewport (the content area of a browser window or screen). A fixed-position box is given a fixed position within the viewport, and does not scroll when the rest of the page is scrolled. A **Top** offset of zero will position a box at the top of the viewport, while a **Width** value of 100% will set the box width to be the same as the viewport width. This manual (and CSS documentation) refers to boxes that have **Fixed** or **Absolute** position as absolute-positioned (or absolute) boxes.

Sticky position

Another type of position is **Sticky** position. This behaves like a combination of **Relative** and **Fixed** position: boxes with sticky position are relatively positioned (like other inflow boxes) until they reach a defined offset, at which point they become fixed to the viewport. For example, a sticky-positioned box with a top offset of zero will scroll upwards until it reaches the top of the viewport, and will then stick there. A sticky box with a bottom offset of zero behaves similarly when a page is scrolled downwards, while horizontal (left and right) offsets can be used to restrict horizontal scrolling.

There is, however, one significant difference between the behavior of fixed-position boxes and that of sticky boxes: fixed boxes remain fixed on screen when their parents scroll out of view, but sticky boxes remain within the bounds of their parents, and will scroll when the far edge of their parent catches up with them. In the case of a sticky-positioned box with a top offset of zero, this will stick to the top of the screen until the bottom edge of its parent catches up and pushes it out of view. This behavior may be useful on occasions—but if you want a box to remain visible at all times you should insert it within the page div rather than within a child or descendant of the

page div. (The page div is always visible, unless there is absolute-positioned content outside its bounds.)

Sticky-positioned boxes that do not have a defined offset behave identically to relative-positioned boxes, so Xway automatically adds a top offset of zero when a box is given sticky position. You can change this to a different value (e.g. 10px if you want a box to stick 10 pixels from the top of the screen) or remove it if you set another offset—but you will lose the sticky behavior if a sticky box does not have any defined offsets.

Xway also sets a positive z-index for boxes that have sticky position. This ensures that other content will scroll behind a sticky box rather than scroll in front of it (and hide it), but you can set a negative z-index on the sticky box if you want other content to scroll in front of it.

Note: Safari treats front-to-back (z-index) order differently from other browsers when an element has sticky position: sticky elements are ordered in front of other content, unless the z-index of the sticky element is set to a negative value. This could be regarded as a useful behavior, but it introduces confusion when other browsers are following web standards. So it's better to set a positive z-index (as Xway does automatically) if other content should scroll behind the sticky box, or a negative z-index if other content should scroll in front of it (in all browsers).

Box dimensions

You can set the width and height of a box in the Dimensions section of the Box Inspector. You can also set minimum and maximum widths and heights.

Inflow container boxes

Inflow (relative-positioned) container boxes default to having undefined width, which means that they occupy whatever width is available in their parent—they are flexible by default. If padding has been applied to the parent box, the child box will take up the space that is available within the padding (minus any space that is used by the child's margins). If you wish to limit the width of a box so that it is proportional to the width of its parent, you could enter a percentage value, such as 80%.

Inflow boxes also default to having undefined height, which means that their height adjusts to the height of their content.

When a container box is inserted on a page, Xway gives it a minimum width and height of 100px. This prevents it from shrinking to zero width or height if it has no content. You can clear these values if they are no longer needed (e.g. after adding content).

Absolute container boxes

If an absolute-positioned container box has undefined width, its width is adjusted to the width of its content.

Content boxes

If you insert a graphic box, Xway leaves its width and height to be undefined (so that they adjust to the size of the graphic content) but sets a maximum width of 50%, which means that the box is constrained to be no wider than 50% of the width of its parent. It is generally best to leave the height of graphic boxes undefined. Setting both width and height for a graphic will override its natural aspect ratio, so it's usually best to set one or the other (generally width). If you set the width to be half the natural width of a graphic, it will be displayed at 2x (“retina”) resolution.

Content boxes can have flexible (percentage) widths and heights—but percentage heights (and percentage min/max heights) are ignored (by Xway and browsers) if they're applied to inline graphics.

Note: The reason that CSS ignores percentage heights for inline items is because this would lead to recursive calculations in cases where the height of a container box is calculated from the height of its contents.

Box offsets

Absolute-positioned boxes may have offsets that allow them to be positioned in relation to their parent (if they have **absolute** position) or in relation to the viewport (if they have **fixed** position). For example, a box with absolute position that has a left offset of 10px will be positioned 10 pixels from the left of its parent. Left/right and top/bottom offsets can be set in the **Offsets** section of the **Box Inspector**. If an absolute box does not have a horizontal (left/right) or vertical (top/bottom) offset, its position is determined by where it is within the text flow (although in other respects it has been taken out of the text flow).

Note: Absolute boxes can have (up to) two horizontal offsets (left+right) or one offset and a width (left+width or right+width) and up to two vertical offsets (top+bottom) or one offset and a height (top+height or bottom+height). If you try to define two (horizontal or vertical) offsets and a length, one of these will become undefined: so if you have a left and right offset and you define a width, either the left or right offset will become undefined (Xway tries to be helpful and clears the offset or length that hasn't recently been modified—if you set the right offset and then set the width, Xway will clear the left offset.)

Offsets are also used with sticky-positioned boxes to determine the point at which the box sticks to the viewport. For example, a sticky-positioned box that has a top offset of zero will stick to the top of the viewport when a page scrolls upwards. Sticky boxes may have up to four offsets, regardless of whether they also have a width and/or height.

Moving boxes with the mouse

Absolute-positioned boxes that have defined offsets can be dragged to a different position. Dragging an absolute-positioned box changes its offsets.

Inflow boxes can be dragged to a different location within the content flow. Xway draws an insertion point to indicate the point at which an inline box (such as a graphic) will be inserted, or the point after which a block element (such as a div) will be inserted. Block elements cannot be inserted within text. They can only be inserted before or after other block elements (e.g. at the end of a paragraph that contains an insertion point).

If you hold down the Option key while dragging a box (or several boxes), the box (or boxes) will be duplicated instead of moved.

Resizing boxes with the mouse

Boxes that have a defined width or height, or defined left/right or top/bottom offsets, can be resized by dragging their resize handles. Any box that is selected will display resize handles on its edges and corners, but some handles may be disabled (drawn in gray) to indicate that a box cannot be resized in that direction. For example, it is not possible to resize the height of a box that does not have a defined height (or defined top/bottom offsets), because its height is determined by its content. If multiple boxes are selected, dragging a

resize handle will resize all the boxes that are in the selection (if they can be resized in that direction).

Margins

Inflow container boxes can be positioned using margins. The left (or right) margin of an inflow box is the distance from the left (or right) of its parent (after the parent's padding has been subtracted). The top (or bottom) margin of an inflow box is the minimum distance from the bottom of previous inflow content (or from the top of following content).

Horizontal margins can be used to center, left-align, or right-align inflow boxes. There is an **Align** popup that sets margins accordingly.

Negative margins can be used to overlap boxes.

Margins can also be applied to inline content boxes (graphics, videos, iframes etc.) to add space around the box. When inline boxes are placed within empty paragraphs, without any surrounding text, you can adjust (or remove) the vertical spacing between successive boxes by adjusting the vertical margins on the containing paragraphs:

1. Select an inline box.
2. Right-arrow to display the Paragraph Inspector.
3. Adjust the top and bottom margins (e.g. by setting them to zero).

Note that percentage margin values are calculated as a percentage of the parent's *width*, for both left/right and top/bottom margins.

See [Margins](#) (page 111) for a more detailed discussion of margins, including collapsing margins.

Vertical alignment

The Vertical Align popup in the Margins And Alignment section of the Box Inspector can be used to set the vertical alignment of inline content boxes. See [Vertical alignment](#) (page 115) for more information.

Measurements

Xway supports most types of CSS measurement. For example, you can define the width of a box in pixels, or as a percentage—or by using any of the following units: points, picas, inches, centimeters, millimeters, ems, rems, vh, vw, vmin, and vmax. See [Measurements](#) (page 102) for more information.

Padding

Padding can be added to boxes via the **Padding** section of the **Box Inspector**. See [Padding](#) (page 113) for more information.

Z-Index

The z-index of a box controls its front-to-back order on a page. The rules for front-to-back stacking in HTML and CSS are complicated, and it is usually simplest to allow items to be stacked according to their normal order, and leave z-index undefined unless it is needed for a particular reason. But see [Z-index](#) (page 116) for more information.

Background

Background colors and images can be added using the **Background** section of the **Box Inspector**. See [Background](#) (page 104) for more information.

Borders

Borders can be added using the **Borders** section of the **Box Inspector**. See [Borders](#) (page 106) for more information.

Corners

Rounded corners can be defined using the **Corners** section of the **Box Inspector**. See [Corners](#) (page 107) for more information.

Overflow

The overflow behavior of a box can be set in the **Box Inspector**. When overflow is set to hidden, boxes clip their content (including child boxes) to their bounds. See [Overflow](#) (page 113) for more information.

Opacity

The Opacity popup can be used to control the opacity (non-transparency) of a box. See [Opacity](#) (page 113) for more information.

Visibility

The Visibility popup can be used to control the visibility of a box. See [Visibility](#) (page 114) for more information.

Display

The Display popup can be used to control whether a box is displayed. See [Display](#) (page 109) for more information.

Text

The Text section of the Box Inspector lets you define styles that will be applied to text that is within the box.

Extended Properties

The Extended Properties section of the Box Inspector lets you define extended properties that are not otherwise supported by Xway. See [Extended properties](#) (page 156).

Dynamic Styles

The Dynamic Styles section of the Box Inspector lets you define styles that are applied when the mouse hovers over a box or clicks on it, or when a box has input focus, or when it is targeted by a link. These can be used to create rollover and other effects. See [Dynamic styles](#) (page 94) for more information.

Default Styles

The Default Styles section of the Box Inspector lets you define default styles for particular elements (such as headings or paragraphs) within the box—if you wish these to be different from the default styles that are used on the rest of the page.

If you wish to remove a default style that you have defined, you can do so by selecting Inherit Default Style.

Chapter 5: Text

Working with text

Text elements can be categorized as block elements (such as paragraphs) or inline elements (smaller elements that are contained within a paragraph). In Xway, block elements are referred to as paragraphs and inline text elements (text runs) are referred to as spans. When used in this way, “paragraphs” include headings and other elements in addition to normal paragraphs and “spans” include other elements besides spans (in the strict sense). Xway displays a Paragraph Inspector for paragraphs and a Span Inspector for spans (text runs).

*Note: In this manual, we sometimes distinguish between HTML spans (spans in the strict sense) and general inline text elements in a more general sense by using a sans-serif font for **span** in the strict sense.*

A third category of text element is lists, which are collections of list items. List items are a type of paragraph, and are typically preceded by a number, or letter, or bullet. Xway displays a List Inspector for lists.

Text can be entered and edited with Xway in a way that is similar to most text editors. You can style paragraphs by choosing a paragraph style from the Paragraph Inspector. Similarly, you can style a span (a run of text) by choosing a style from the Span Inspector, and you can style a list (a collection of list items) by choosing a style from the List Inspector. Note that you do not need to select an entire paragraph, or span, or list in order to style it. Any paragraph that contains a text insertion point (or text selection) is considered to be the current paragraph (or one of several current paragraphs) and can be styled using the Paragraph Inspector. Similarly, a span that contains a text insertion point is considered to be the current span and can be styled using the Span Inspector—if there are several spans that contain the text insertion point, the innermost span is considered to be the current span. Similarly for lists: a list that contains a text insertion point is considered to be the current list and can be styled using the List Inspector—and since lists can also be nested, if there

are several lists that contain the text insertion point, the innermost list is considered to be the current list.

Before you apply a style to a particular paragraph, or span, or list, it is worth considering whether it would be better to change the default style that is applied to that type of paragraph, or span, or list.

Editing text

To start editing text:

1. Click on a box that is already selected, or
2. Click twice on a box that is not selected, or
3. Type **Command-Return** to begin editing text in the currently selected box. You can also use the **Enter** key on extended keyboards.

To finish editing text:

1. Click on a different box, or
2. **Command-click** on the box you are editing, or
3. Type **Command-Return** (or **Enter** on extended keyboards).

*Note: Typing **Return** (instead of **Command-Return**) when a box is selected will begin a new paragraph after the box that is selected. Also: clicking twice to begin editing is not the same as double-clicking—a double-click (clicking twice in fast succession) will select the word that is clicked on.*

Importing text

You can import text into any box that has a text insertion point or text selection by choosing **Text** from the **Insert** menu (shortcut: ⌘Y). Xway reads text in plain (.txt) or rich-text (.rtf) format, but text is always imported as plain text, without any of its original styles, similar to copying and pasting (see below).

Copying and pasting text

You can copy text by selecting it on a page and choosing **Copy** (or **Cut**) from the **Edit** menu (shortcuts: ⌘C, ⌘X).

You can paste text into any box that has a text insertion point or text selection:

1. Choose **Paste** from the **Edit** menu (shortcut ⌘V). If the text was copied from Xway, it will retain its original structure (including paragraphs, spans, links, and any associated styles). If it was copied from another application, it will be pasted as plain text, without any of its original styles. There isn't a good way to convert styled text into structured (HTML) text, but it's possible that a future version of Xway will be able to paste HTML text that has been copied from a browser.
2. If the text was copied from Xway, you can paste it as plain text (discarding spans, links, etc.) by choosing **Paste Plain Text** from the **Edit** menu (shortcut ⌘⇧V).

Text (like other content) can be copied and pasted within the same document or between documents. Text can also be copied and pasted from Xway into other applications.

Note: Xway copies the text elements that are displayed on a page, rather than the styled text that is used to display them. One consequence is that pasted text may be styled differently from the text that it was copied from. For example, if you copy some text from a paragraph which is styled to display 12px italic text, the text that you paste will not carry the styles that were applied to the paragraph (unless you copy the entire paragraph, in which case the styles that are applied to it are also copied).

Paragraphs

Paragraphs are separated from previous paragraphs (and headings etc.) by carriage returns. You can combine paragraphs by deleting the carriage return that separates them. In this case the style that was applied to the first paragraph will now be applied to the combined paragraph.

Paragraph type

The **Type** popup in the **Paragraph Inspector** allows you to select a paragraph type. You can use this to convert between normal paragraphs, list items, and various types of heading.

List level

The List Level controls in the Paragraph Inspector allow you increase or decrease the level at which list items are nested, or to convert paragraphs (with a list level of zero) into list items (with a list level of one or greater) and vice versa. See [Lists](#) (below) for more information.

Styling paragraphs

There are a number of style properties that can be applied to paragraphs or spans. These include: [Font](#), [Size](#), [Weight](#), [Font style](#), [Text color](#), [Font variant](#), [Capitalization](#), [Text decoration](#), and [Letter spacing](#).

The following style properties are specific to paragraphs rather than spans: [Alignment](#), [Line height](#), [First line indent](#), and [Margins](#).

Paragraph style properties are discussed in more detail in [Chapter 7: Styles](#).

Line breaks

You can insert a line break by typing Control-Return, or by choosing Line Break from the Insert menu. Adding line breaks within a paragraph does not divide it into separate paragraphs. (You might use line breaks to separate lines within a verse of poetry.)

Non-breaking spaces

You can insert a non-breaking space by typing Option-Space, or by choosing Non-Breaking Space from the Insert menu. Non-breaking spaces are not replaced by automatic line breaks during text wrapping.

Spans

In Xway, spans are runs of text that occur within larger blocks of text (such as paragraphs). Spans include text that is emphasized (and is output with `em` elements), or strong (output with `strong` elements), or is distinct in some other way (possibly output using `span` elements).

Adding spans

Spans can be added by selecting a run of text and choosing a type from the **Type** popup menu in the **Span Inspector**: e.g. choose **Emphasized** for emphasis (normally indicated by italics) or **Strong** for important text (normally indicated by bold weight).

Another way to add a span is to select a run of text and change its styling (e.g. by setting its color to red).

Note that spans can enclose other spans, but it is not possible for them to partially overlap with other spans (this is disallowed by HTML's tree structure).

Another way to add spans is to choose **Emphasized** (shortcut: ⌘I), **Strong** (shortcut: ⌘B), or another span type from the **Format** menu: this adds an emphasized (or strong or other) span if the current text selection isn't already wrapped by one, or removes it if it is.

Other span types (in addition to **Emphasized** and **Strong**) include: **Span**, **Bold**, **Citation**, **Code**, **Italic**, **Small**, **Subscript** (shortcut: ⌘-), and **Superscript** (shortcut: ⌘+). Note that **Bold** is different from **Strong** (although both are normally displayed in bold), and **Italic** is different from **Emphasized** (although both are normally displayed in italics): see *Span type* (below).

Note: This method can also be used to wrap multiple spans around a single text run. (e.g. `<em><strong>text</strong></em>`)

Removing spans

Spans can be removed by choosing **None** from the **Type** popup menu in the **Span Inspector**. This will remove the span (along with any styling or attributes that are applied to it), but it will not remove the contents of the span (these are transferred to the span's parent).

Another way to remove spans is to choose **Emphasized** (or another span type) from the **Format** menu, when there is a check mark showing that this span type has previously been added.

Flattening spans

Choose Flatten from the Format menu (shortcut: ⌘T) to remove all spans that are contained within the current selection. If you select a run of text, Flatten will remove all spans that are contained within that run. If you select a box (or boxes) Flatten will remove all spans that are within the box (or boxes), but will not remove any spans that are within child boxes.

Flatten is similar to a “plain text” command in that it removes text styling from the current selection. However, it does this by removing the inline (span) elements to which styling is applied. It does not remove styles that are applied to paragraphs or that are inherited from parent elements.

Note: Flatten does not remove links. There is a separate and similar Remove Links command in the Format menu that does this.

Span type

The Type popup in the Span Inspector can be used to set the type of a span. This is similar to Type popups in the Box Inspector and Paragraph Inspector. In HTML, the type of element that contains a run of text conveys semantic information and is not merely stylistic. It is worth thinking about this when you choose a span type in Xway. For example, if a word or phrase is intended to be emphasized, you should use an Emphasized span. Emphasized text is normally displayed in italics, and spoken with additional stress. On the other hand, if you want text to be italicized because it is a title, you should probably use a Citation span. If there is some other reason for text to be italicized, then you might use an Italic span.

Xway supports the following span types:

Span

This is the default type (in the same way that div is the default type for container boxes). You would use this if none of the other types are appropriate.

Emphasized

Emphasized indicates that a word or phrase is intended to be emphasized (and should be spoken with added emphasis). Emphasized text is normally (but not necessarily) displayed in italics.

Strong

Strong is normally used to indicate that a word or phrase is important in some way. Strong text is normally (but not necessarily) displayed in bold.

Bold

Bold can be used as an alternative to **Strong** for when bold text is not used to indicate importance. Bold text is normally (but not necessarily) displayed in bold.

Citation

Citation can be used to indicate that a phrase is a citation (such as the title of a book). Citations are normally (but not necessarily) displayed in italics.

Code

Code is used to indicate computer code. Code spans are normally displayed with a monospace font, but (as with other spans) you can use default styles to customize their appearance. To add a light gray background, go to the **Default Styles** section of the **Document** (or **Page** or **Box**) **Inspector**, choose **Code** from the **Element** popup, and add an extended property with the name **background-color** and value **#eeeeee**.

Italic

Italic can be used as an alternative to **Emphasized** and **Citation** for text that is not intended to be emphasized and is not a citation of some kind. Italic text is normally (but not necessarily) displayed in italics.

Small

Small text is displayed in a smaller font size: this is approximately 0.83 ems by default, but can be changed in the **Default Styles** sections of the **Document**, **Page** and **Box** **Inspectors**.

Subscript

Subscript text is displayed below the baseline in a smaller font size: this is approximately 0.83 ems by default, but can be changed in the **Default Styles** sections of the **Document**, **Page** and **Box** **Inspectors**.

Superscript

Superscript text is displayed above the baseline in a smaller font size: this is approximately 0.83 ems by default, but can be changed in the **Default Styles** sections of the **Document**, **Page** and **Box** Inspectors.

Styling spans

The **Span Inspector** contains styles that can be applied to spans. These include: **Font**, **Size**, **Weight**, **Font style**, **Text color**, **Font variant**, **Capitalization**, **Text decoration**, and **Letter spacing**. These styles can also be applied to (whole) paragraphs. They are discussed in detail in *Chapter 7: Styles*.

Lists

Lists are collections of list items, which are a special type of paragraph that is normally preceded by a bullet or number (or letter). Lists can be configured and styled using the **List Inspector**.

Creating lists

Lists are created by converting (normal) paragraphs into list items. An easy way to convert paragraphs into list items is to select them (or place the text insertion point within a single paragraph) and click on the **Increase List Level** control (right arrow) near the top of the **Paragraph Inspector**. You can also choose **Increase List Level** from the **Paragraph** submenu in the **Format** menu, or use the associated shortcut (^⌘►). Alternatively, you can choose **List Item** from the **Type** popup at the top of the **Paragraph Inspector**.

When you create a list item, Xway automatically creates a list to contain it, and displays the **List Inspector** to the left of the **Paragraph Inspector**.

Removing lists

To remove a list, select the list items within it, and click on the **Decrease List Level** control (left arrow) near the top of the **Paragraph Inspector**. You can also choose **Decrease List Level** from the **Paragraph** submenu in the **Format** menu, or use the associated shortcut (^⌘◄). Alternatively, you can choose **Paragraph** from the **Type** popup at the top of the **Paragraph Inspector**.

Nested lists

You can create a nested list by selecting a group of list items and increasing their list level (see above). Note that nested lists are nested within list items, and the list level of a nested list is always one more than the list level of its parent list item (you cannot increase it beyond this). If you want to increase the amount of space in front of items in a list, you can do this by changing Left Padding in the List Inspector (see below).

Starting a list

You can start a list by typing **Tab** at the start of a paragraph or list item. This increases its list level, and can be used to create a list (or nested list) while typing.

Ending a list

You can end a list by typing **Shift-Tab** at the start of a list item, or by typing **Return** at the start of an empty list item. This decreases its list level, and ends the current list (or nested list).

List type

There are two main types of list: ordered lists and unordered lists. In ordered lists, the order is significant and items are prefixed with a number or letter. In unordered lists, the order is unimportant (or less important) and items are normally prefixed with a bullet—although it's also possible for them to be displayed without bullets.

The **Type** popup at the top of the List Inspector allows you to convert between ordered and unordered lists.

Start number

The **Start Number** field in the **General** (“List”) section of the List Inspector can be used to set the starting number of an ordered list. This is useful if a list is split into two with intervening text: an appropriate start number can be set on the second list.

Note: Start numbers can be negative, but negative and zero numbers are displayed as decimals regardless of list style. For example, a lowercase alphabetic list that starts at

*-2 will be displayed as -2, -1, 0, a, b, etc. Browsers differ over whether a leading zero is added to negative numbers when the list marker style is **decimal (leading zero)**: Safari adds a zero between the sign and number, but Firefox and Chrome don't. Xway follows Firefox and Chrome.*

Reverse order

The Reverse Order checkbox in the General (“List”) section of the List Inspector can be used to select reverse order in ordered lists. This is useful for countdown lists, such as “top ten” lists which count down from ten to one.

Styling lists

Most of the styles that can be applied to paragraphs can also be applied to lists. These are discussed in more detail in [Chapter 7: Styles](#).

There are also styles that are specific to lists, or have particular relevance. These are discussed below.

List marker

The List Marker popup in the Style section of the List Inspector can be used to choose between different types of list marker.

Ordered lists typically use Decimal numbers, but alternative options include Decimal (Leading Zero), Alphabetic (Lowercase), Alphabetic (Uppercase), Roman (Lowercase), Roman (Uppercase), Greek (Lowercase), and Greek (Uppercase).

Decimal (Leading Zero) is similar to Decimal, but adds a leading zero to numbers below ten.

Alphabetic (Lowercase) and Alphabetic (Uppercase) use alphabetic characters from the Latin alphabet.

Roman (Lowercase) and Roman (Uppercase) use Roman numerals.

Greek (Lowercase) and Greek (Uppercase) use alphabetic Greek characters.

Note: Firefox does not support Greek (Uppercase).

Unordered lists typically use bullets, and the default behavior (in Xway and in browsers) is for level-1 lists (un-nested lists) to use solid (disc) bullets, while level-2 (nested) lists use hollow (circle) bullets, and level-3 (and higher) lists

use square bullets. It's also possible for unordered lists to be displayed without any kind of bullet (choose **None** from the List Marker popup).

If you would like to change the list markers that are used for all the lists on your website (or on certain pages, or in a particular box), you can use default list styles to do this (see below).

Marker position

List markers (numbers, bullets, etc.) can be positioned outside or inside a list. If they are positioned outside a list, they stand apart from their list items (text doesn't wrap beneath them) and are more visually distinct. This is the default option.

You can use the Marker Position popup in the Style section of the List Inspector to choose between outside and inside position.

Padding

The padding fields in the Padding section of the List Inspector can be used to set padding. The Left Padding field defaults to 40px and controls the amount of space that is displayed before list items. If a list is displayed in a large font size, or if it uses prefixes that take up extra space (e.g. Roman numerals), you might want to increase the amount of left padding to adjust for this.

Default list styles

If you want to change the default style of all the lists that are on a website, or on a page (or set of pages), or within a box, you can use the Default Styles sections in the Document, Page, and Box Inspectors to do this. It's generally a good idea to do this at the highest level possible: use the Document Inspector to change the default list styles for all pages, or use the Page Inspector on a master page to change the default list styles for all pages that depend on that master page.

Xway allows you to set default styles for different levels of list. If you click on the Element popup in the Default Styles section of the Document, Page, or Box Inspector, you will see that it contains Ordered List 1, Ordered List 2, and Ordered List 3, along with Unordered List 1, Unordered List 2, and Unordered List 3. Ordered List 3 and Unordered List 3 styles apply to level 3 (and higher) lists, while Ordered List 2 and Unordered List 2 styles apply to level 2 (nested) lists,

and Ordered List 1 and Unordered List 1 styles apply to un-nested lists. Note, however, that level-2 styles also apply to level-3 (and higher) if level-3 styles have not been defined, while level-1 styles apply to level 2 (and higher) if level-2 styles have not been defined.

This is easier to understand if we take a concrete example. Unordered lists typically use solid (disc) bullets for level 1, hollow (circle) bullets for level 2, and square bullets for level 3. If we wish to have level-1 lists use hollow instead of solid bullets, we can do this by choosing Unordered List 1 from the Element popup in the Default Styles section of the Document/Page/Box Inspector, and choosing Circle from the List Marker popup. However, unless we also set default styles for the other levels of unordered list, the default style for Unordered List 1 will apply to all levels of unordered list, so that level-3 lists also use hollow bullets instead of square bullets. If we want level-3 lists to continue using square bullets, we need to choose Unordered List 3 from the Element popup, and choose Square from the List Marker popup.

Here's another example that applies to ordered lists. Perhaps we would like nested ordered lists to use lowercase alphabetic characters instead of decimals, and have doubly-nested lists use lowercase Roman numerals. To do that, choose Ordered List 2 from the Element popup and choose Alphabetic (Lowercase) from the List Marker popup, then choose Ordered List 3 from the Element popup and choose Roman (Lowercase) from the List Marker popup. You should find that un-nested lists continue to use decimal numbers, while level-2 (nested) lists use alphabetic characters, and level-3 or higher (multiply nested) lists use Roman numerals.

Language

The Language popup in the Document: Page section of the Document Inspector can be used to set the default language of a document. This popup contains a number of common languages (Danish, Dutch, English, Finnish, French, German, Italian, Norwegian, Portuguese, Russian, Spanish, and Swedish) along with any languages that are defined as Preferred Languages in the Language & Region pane of System Preferences. If you define additional languages in a document (see below) these are also added to the popup.

The language of new documents defaults to the first Preferred language in System Preferences. Change this if you are creating a website in a different language.

There is a separate text field underneath the Language popup, which displays the language code for the chosen language: e.g. `en` for English or `de` for German (Deutsch). If you wish to choose a language that isn't in the Language popup, you can do so by entering its code in this text field: e.g. `pl` for Polish. You can also define regional variants of a language by entering a code that indicates a regional variant, such as `en-gb` for British English or `fr-ch` for Swiss French.

When you enter a language code, Xway will normally display the name of this language in the Language popup. If instead it displays the code that you entered (and it's not an obscure language) check that you entered the code correctly.

You can also set the language of individual pages in the Page section of the Page Inspector.

*Note: Specifying a language is important for accessibility reasons. Xway doesn't allow the language of a document or page to be set to **None**. If you choose **None** (or delete the language code) in the **Page Inspector**, Xway will reset the page language to be the same as the document (or master page) value.*

Tidying text

You can improve Xway's HTML output by choosing Tidy from the Edit menu. This removes superfluous text elements such as extra spaces, empty paragraphs, and empty spans.

The Tidy dialog allows you to choose whether to tidy an entire document, or a selected page (or pages), or a selected box (or boxes). Tidy ignores boxes that use master content, since their content comes from a master box. If you are tidying page by page, or box by box, it is better to start with master pages.

Tidy displays the names of pages and boxes where issues were detected and fixed. If issues are fixed, it's possible to undo these changes by choosing Undo Tidy from the Edit menu. One reason to do this (temporarily) might be if you want to see which changes were made. To do this, you could copy the names

of pages and boxes and paste them into a text note for reference, then switch to each page in turn and look at Xway's HTML view while undoing and redoing.

The Tidy dialog contains the following options:

Remove Extra Spaces

This option replaces multiple spaces with single spaces, as in browsers, and also discards spaces at the beginning or end of a paragraph, since these are also discarded by browsers. If you want to add space at the beginning or end of a paragraph, and have it be displayed in browsers, you can use left and right margins to do this.

Remove Empty Paragraphs

This removes paragraphs that don't contain any content. Empty paragraphs are discarded by browsers. If you want to add space before or after a paragraph, and have it be displayed in browsers, you can use top and bottom margins to do this.

Remove Extra Spans

This removes unnecessary spans:

1. Non-semantic spans (spans with a `span` tag, as opposed to spans with a semantic tag, such as `em` or `strong`) are removed if they don't have any style or attributes.
2. Non-semantic spans that don't have any attributes are merged with parent spans if they enclose the same content: e.g. `<span class="style1"><span class="style2">content</span></span>` is flattened to `<span class="style3">content</span>` (where `style3` combines properties from `style1` and `style2`).
3. Spans and links that don't contain any content are removed: e.g. `<em></em>` and `<a href="[destination]"></a>` are removed.

Remove Whole-Paragraph Spans

This removes non-semantic spans that are applied to an entire paragraph, and transfers style properties to the paragraph, so long as the span does not have

any attributes. In some cases, this can affect the way that text is displayed in a browser, which is why this option is turned off by default. But in many cases, whole-paragraph spans are unnecessary. They may be created when a user selects all the text in a paragraph in order to style the paragraph. (Xway now gives priority to the Paragraph Inspector over the Span Inspector in this situation.)

Remove Recursive Spans

This removes spans that are nested in a recursive fashion, while preserving style properties. This option is turned off by default, because semantic spans might occasionally be nested deliberately (e.g. `<strong><strong>` is stronger than `<strong>`), but it is helpful for documents that have been imported from Freeway documents. These may contain spans that are very deeply nested as the result of a bug in Freeway. Check Document fixes these by arbitrarily reducing the level to which spans can be nested (see [Fixing document problems](#) on page 29), but it doesn't remove less deeply nested spans. It's a good idea to run Check Document before selecting this option, since Tidy is slow at resolving recursions that can be hundreds of levels deep.

Merge Adjacent Spans

This merges adjacent spans that have the same style and attributes. It's possible to create adjacent spans in Xway, but they are more common in documents that have been imported from Freeway documents.

Merge Adjacent Links

This merges adjacent links that have the same destination. Adjacent links are sometimes found in imported Freeway documents. They appear "broken" in browsers, since clicking on them activates one part of what looks like a single link.

Chapter 6: Master pages

Working with master pages

Masters and instances

A master page is a special type of page that acts as a template for other pages, which are known as *instance pages*. If you change the content or properties (style, attributes, etc.) of a master page, these changes will also be applied to instance pages that derive from that master page—unless the instance page has been set not to use the master page’s content, or style, or attributes (etc.)

As well as master and instance pages, there are also master and instance boxes. A master box is any box that is on a master page. If you change the content or properties of a master box, these changes will also be applied to instance boxes that derive from that master box—unless the instance box has been set not to use the master box’s content or properties.

Master pages and site pages

Master pages are displayed within the **Master Pages** folder in the **Site** panel. They are distinct from *site pages*, which are displayed within the **Site** folder in the **Site** panel. Site pages are the pages that make up your site: they are normally published—unless you have turned off the **Publish** checkbox—while master pages are never published. Site pages do not need to have a master page (their master page can be set to **None**), but if they do have a master page, they are instances of that master page.

It’s also possible for master pages to have their own master pages. A master page that has its own master page is an instance of that master page. You might find it useful to have content and properties that are shared by a large number of pages on one master page, and then create master pages that derive from this original master page and contain additional content and properties that are used by smaller groups of pages.

Document settings

Xway documents also contain an internal master page that stores settings that are defined in the Document Inspector. Any page that does not have its own (actual) master page is an instance of the internal document settings page.

If a page does not have an actual master page, **Use Master** checkboxes are labelled **Use Document Style**, **Use Document Attributes**, **Use Document Favicons**, and so on.

Types of master inheritance

There are three main types of master/instance inheritance in Xway: style (CSS styles), attributes (HTML attributes), and content.

An instance page (or box) takes its style from its master page (or box) unless **Use Master Style** is turned off in the **Page Inspector** or **Box Inspector**. It also takes its attributes from its master page (or box) unless **Use Master Attributes** is turned off in the **Page Inspector** or **Box Inspector**. Similarly, an instance box takes its content from its master box unless **Use Master Content** is turned off in the **Box Inspector**.

Note: Freeway does not distinguish between styles and attributes, but groups them together in a single “settings” category.

There are also some other types of master/instance inheritance: default styles, dynamic styles, meta tags, favicons, and various types of page markup. These are controlled by their own **Use Master** checkboxes.

Master styles

Master styles are CSS styles that are derived from a master page or box. An instance page or box takes its style from its master page or box unless **Use Master Style** is turned off in the **Page Inspector** or **Box Inspector**. If you change a style property for a page or box, the style of that page or box is detached from its master style (**Use Master Style** is turned off), and future changes to the master style (or document style) will not affect it, unless **Use Master Style** is turned on again.

Default master styles are default styles that are derived from a master page or box. These behave similarly to master styles, but there is a separate **Use Master**

Default Style checkbox that can be turned off or on (for each element that has a default style).

Master attributes

Master attributes are HTML attributes that are derived from a master page or box. An instance page or box takes its attributes from its master page or box unless **Use Master Attributes** is turned off in the **Page Inspector** or **Box Inspector**. If you change an attribute for a page or box, the style of that page or box is detached from its master style (**Use Master Attributes** is turned off), and future changes to the master attributes (or document attributes) will not affect it, unless **Use Master Attributes** is turned on again.

Attributes are mostly grouped together in the first two sections of the **Page Inspector** and **Box Inspector** (the **Page/Box** and **Extended HTML Attributes** sections). In the case of images, videos, and audio boxes, the resource content is also an attribute of the box. This means that the **Use Master Attributes** and **Use Master Content** checkboxes are linked together for these types of box. Turning either checkbox off or on for an image/video/audio box will also turn the other checkbox off or on.

Finally, the HTML type of a box—as set in the **Type** popup in the **Box** section of the **Box Inspector**—is also considered to be an attribute of the box. (It isn't an attribute, in a strict sense, but Xway groups it with other attributes.) If **Use Master Attributes** is turned on for an instance box, any change to the type of its master box will also change the type of the instance box.

Master content

Master content is content that derives from a master box. An instance box takes its content from its master box unless **Use Master Content** is turned off in the **Content** section of the **Box Inspector**. If you change the content of a box, its content is detached from the master box's content (**Use Master Content** is turned off), and future changes to the master box's content will not affect it, unless **Use Master Content** is turned on again.

*Note: There is no **Use Master Content** checkbox in the **Page Inspector**. Whether a page takes its content from a master page is controlled by the **Use Master Content** checkbox for the page's root container box (page div) in the **Box Inspector**.*

The content of a box includes any changes that are made to text elements that are part of the box's immediate content—this is the content you can edit in text-editing mode after pressing **Command-Return** or clicking within the box. Turning **Use Master Content** on for a container box will cause the box's immediate content to be derived from its master box, but it will not affect the content or style (or other properties) of boxes that are within the container box—they are controlled separately by their own **Use Master** checkboxes. This gives you detailed control over the content of boxes: the immediate content of a box might be derived from a master box, but the content and style of a box that is within this parent box can still be independent of its own master box (and vice versa).

Note: Changes to text properties and links (including links that are applied to boxes) are registered as changes to the content of the parent container box.

Note: Content is not automatically copied to instance pages whenever a master page is edited, because this could have negative consequences for performance (e.g. in the case of a master page that has many instance pages). Instead it is copied when switching to an instance page or when it needs to be copied for other reasons (e.g. before publishing).

Locking master content

You can protect master content from being changed on instance pages by selecting **Lock Instances** in the **Content** section of the **Box Inspector**.

The value of **Lock Instances** is inherited by child boxes: if you select **Lock Instances** for the page div on a master page, this will lock instances of the page div and of any box that is descended from the page div (all boxes on a page), unless they are separately unlocked. Typically, you might select **Lock Instances** for a master page div, and then deselect it for any box that is intended to hold instance content.

*Note: If you have selected or deselected **Lock Instances** for a box, you can reattach it to its parent box's **Lock Instances** setting by changing it back. If **Lock Instances** for a child box is set to match **Lock Instances** for its parent box, **Xway** resets the child box's setting so that it is controlled by its parent box's setting.*

Creating a new master page

You can create a new master page by choosing **New Master Page** from the **Page** menu. If a folder is selected within the **Master Pages** area of **Site** panel, the new master page will be added within this folder.

You can also add a new master page by control-clicking (or right-clicking) on a folder in the **Master Pages** section of the **Site** panel and choosing **New Master Page** from the contextual menu. This will add a new master page to the folder that you clicked on.

Master pages are automatically named “Master 1” etc. but you can rename them as you like.

Converting a site page into a master page

You can convert a site page into a master page by dragging it into the **Master Pages** folder in the **Site** panel.

Converting a master page into a site page

You can also convert a master page into a site page by dragging it from the **Master Pages** folder into the **Site** folder in the **Site** panel. However, this is only possible if a master page does not have any instance pages (site pages cannot have instance pages).

Setting a master page

New documents automatically contain a master page (“Master 1”). This is used for the site page (“Page 1”) that a new document also contains. It is also used for any new (site) pages that are added, unless a different master page is chosen in the **New Page** dialog.

*Note: Xway does not automatically add a master page to old documents. Template pages from old documents can be converted into master pages by dragging them into the **Master Pages** folder.*

The **Page** section of the **Page Inspector** contains a **Master Page** popup that can be used to set the master page from which a page is derived. When a page’s master page is changed, Xway matches its existing content and properties with the content and properties of the new master page, as far as possible. Xway matches boxes with master boxes if they are compatible and have the

same Name/ID (not required in the case of page divs) and if their parent box can be matched with a parent master box. If a box cannot be matched, it is detached: it does not have a corresponding master box, but its content and other properties are preserved.

During the process of matching a page to a master page, Xway respects the status of **Use Master** checkboxes, by not turning them on if they're currently turned off. However, if a **Use Master** checkbox is already turned on, and the properties or content of the new master page or box matches that of the old master page or box, Xway ensures that the **Use Master** checkbox remains on.

If you set a master page for a page that does not currently have a master page (e.g. in a document that was created with an older version of Xway), Xway will turn on **Use Master** checkboxes for any properties and content that match the properties and content of the new master page and its boxes.

*Note: Xway (unlike Freeway) does not require that pages have master pages. Setting a master page to **None** will detach its content from its current master page and leave it without a master page, apart from the internal document settings page.*

*Note: Master pages can have their own master pages. The **Master Page** popup for master pages disallows master pages that are an instance (directly or indirectly) of the currently selected page (or pages). A master page cannot be an instance of itself, or of a page that is an instance of itself.*

Deleting master pages

If you delete a master page, Xway (unlike Freeway) will not delete instance pages of this master page. Instead, it will detach them from the master page, so that all their content and properties are preserved. If you want to know whether a master page that you are deleting has instance pages, look at the text of the confirmation alert: if there are instance pages, the alert will state: "Instance pages will not be deleted".

Navigating to a master page

Choose **Master Page** (shortcut: `⌘S`) from the **Go** menu to navigate to the current page's master page (if it has one). Choose **Back** from the **Go** menu to return to the instance page.

Duplicating an instance page or box

If you duplicate an instance box, the duplicated box is detached from its master box (it is not possible for two instance boxes on the same page to have the same master box).

If you duplicate an instance page, the duplicated page keeps the same master page (a master page can have multiple instance pages).

Copying an instance page or box

If you copy an instance box, the copied box is detached from its master box—as happens when a box is duplicated.

If you copy an instance page, the copied page is also detached from its master page—in contrast to what happens when a page is duplicated. The reason this happens is because there is no guarantee that the master page will be available when the page is pasted: it might have been deleted or changed, or the copied page might be pasted into a different document.

Structuring a master page

We recommend dividing a master page into sections containing content that is shared by other pages (header, menu, footer) and a main section containing content that is unique to each page. This allows you to make changes to shared content, and have these be applied to all instance pages. Most Xway templates follow this pattern.

To prevent inadvertent changes to instance boxes, you can select **Lock Instances** for master boxes that contain shared content. To do this:

1. Set up a master page with three or four sections: header, main, footer (with a menu within the header) or header, menu, main, footer.
2. Select the page div, and click on **Lock Instances** in the **Content** section of the **Box Inspector**. This will lock instances of the page div, and (since **Lock Instances** is inherited by child boxes) it will also lock instances of any box that is descended from it (all boxes on the page).
3. Select the main section and click on **Lock Instances** to deselect it. This will unlock instances of main and of any boxes that are inside it.

Chapter 7: Styles

Working with styles

Individual styles and default styles

There are two ways in which styles can be used in Xway:

1. Individual styles can be applied to individual elements (such as pages, boxes, paragraphs, or spans).
2. Default styles can be applied to all elements of a particular type.

Using default styles is an efficient way to style pages in a document. You can define a style that will be applied to all paragraphs, or to all headings at a particular level (heading 1 etc.) If you later wish to change the styling, you can do so by editing the default style for that element.

Default style properties are overridden by individual style properties, as you would expect. If the default style for **Strong** elements has **Bolder** weight, an individual **strong** element can of course be styled differently.

Individual styles can be applied at a document level, or to individual pages, boxes, paragraphs, and spans. For example, you can use the **Text** section of the **Document Inspector** to specify the default appearance of text (e.g. font and font-size) on each page within a document, or you can use the **Text** section of the **Page Inspector** (or **Box Inspector** or **Paragraph Inspector** or **Span Inspector**) to specify the default appearance of text on a particular page (or in a particular box, paragraph, or span). The **Document Inspector** also allows you to define the default appearance of page divs: this allows you to choose whether (for example) page divs are centered by default.

Default styles can also be applied at a document level, or at a page level, or at a box level. For example, you can use the **Default Styles** section of the **Document Inspector** to specify the default appearance of paragraphs and headings (and other elements) on every page within a document. You can also use the **Default Styles** section of the **Page Inspector** to specify the default appearance of elements on that page. If you wish to define default styles for

elements in a particular box, you can use the **Default Styles** section of the **Box Inspector** to do this.

Document and master styles

Document styles are actually a type of master style. Xway documents contain an internal master page that defines document settings. If you change the style of an individual page (or page div) that does not have its own master page, the style of that page (or page div) is detached from the document style, and future changes to the document style will not affect that page. You can reattach the style of a page (or page div) to the document style by selecting **Use Document Style** in the **Page Inspector** (or **Box Inspector** for page divs).

You can also set styles on actual master pages. Styles that are set on a master page will be used on any pages that derive from this master page, unless a separate style has been set for that page. If you have more than one master page, you can define different styles that will be used on different groups of pages, by setting each group to use a different master page. If you subsequently change the style of a page (or box) that has a master page (or box), the style of that page (or box) is detached from its master style, and future changes to the master style will not affect that page (or box). You can reattach the style of a page or box to its master style by selecting **Use Master Style** in the **Page Inspector** or **Box Inspector**.

Default styles can also be set on master pages and master boxes. If you change default styles on a page that does not have a master page, they will be detached from the document's default styles, but they can be reattached by selecting **Use Document Default Style** in the **Page Inspector** or **Box Inspector**. If you change default styles on an individual page that has a master page, they will be detached from the master page's default styles, but they can be reattached by selecting **Use Master Default Style** in the **Page Inspector** or **Box Inspector**.

The **Use Document/Master Default Style** checkbox acts independently for each type of default style: a page or box may have its own default style for one type of element, but use the master default style for a different element.

If you have defined a style or default style in the **Document Inspector**, you can remove it by selecting **Inherit Style** or **Inherit Default Style**.

See [Chapter 6: Master pages](#) for more information on master pages.

Style inheritance

Style properties follow CSS inheritance rules. Not all properties are inherited, but some (including many text properties) are. What inheritance means is that if a property is applied to an element, it is also inherited by the children of that element. As an example, a font size may be applied to a page, in which case any text that is on that page will inherit that page's font size, if it does not have its own font size (or its own default font size) and there is not a more immediate ancestor (box, paragraph, or span) from which it can inherit this property.

Style inheritance makes sense if you think about elements within a paragraph. If you have an **Emphasized** span that occurs within a paragraph, it probably does not have a specific font size. Instead it uses (inherits) the font size that is applied to the paragraph. If a paragraph does not have a specific font size, then both the span and the paragraph inherit their font size from their closest ancestor that does have a font size. If nothing has a font size, CSS specifies that **Medium** is used as a default.

Style inheritance may also be combined with relative sizes (such as **Larger** or **Smaller**). In this case the relative size is applied to the inherited value, and an element is given a font size that is (a certain amount) larger or smaller than the size that it has inherited.

You generally don't need to know which style values are inherited and which style values are not inherited: if Xway allows you to define text style values for non-text elements (such as boxes or pages), that is because these particular values are inherited.

Removing style values

Style values can be removed (undefined) by deleting the current value in a text field, or by choosing **Undefined** from a popup menu. If a value is undefined, an inherited or default value will be used instead.

Note: All style values are initially undefined, until they are changed to a different value. If you want to specify a value that is also the default value (e.g. black for text

color) you can change it to a different value (e.g. blue) before choosing the default value (e.g. black).

You can use the **Inherit Style** checkbox in the **Document**, **Paragraph**, **Link**, and **Span Inspectors** to remove style values from the document settings page, or from a paragraph, link or span.

*Note: If you wish to remove style information that is attached to an HTML **span** element (rather than another type of span element, such as **emphasized**), it is generally better to remove the **span** element rather than remove its style. There is no default style for **span** elements, so there is usually not much point in having a **span** element that does not have a style.*

*Note: There isn't an **Inherit Style** checkbox in the **Box Inspector**: box styles include size and position values, and it isn't generally useful to remove these values.*

Dynamic styles

The **Dynamic Styles** section of the **Box Inspector** lets you define styles that are applied when the mouse is moved over a box, or when a user clicks or taps on it, or when a box has input focus, or when a box is targeted by link. These can be used to create rollovers, popups, collapsible sections, and other effects.

There are four types of dynamic style:

1. Hover styles are used when the mouse hovers over an element
2. Active styles are used when a user clicks or taps on an element
3. Focus styles are used when an element has input focus
4. Target styles are used when an element is targeted by a link

To create a dynamic style, select **Hover**, **Active**, **Focus**, or **Target** from the **Type** popup and choose style properties that will be used for this state.

For **Hover**, **Active**, and **Focus** styles, Xway allows you to change the opacity, maximum width, maximum height, text color, background color, background image, and other background properties. Other properties can be entered in the **Extended Properties** list within the **Dynamic Styles** section. For example, adding an extended property named **transform** with a value of **rotate(180deg)** will cause a box to be rotated by 180 degrees clockwise (you can use a negative value for anti-clockwise rotation).

For **Target** styles, Xway also allows you to change visibility and display properties.

Transitions

Dynamic styles can be combined with transitions. If you want the opacity of a box to change over a period of one second, and its background to change over half a second, you can do this by adding an extended property named **transition** with the following value: **opacity 1s, background 0.5s**. If you want the same transition to apply to all properties, you could create a **transition** property with a value of **all 1s** (one second transition for all properties). More complex transitions, with delays and curves as well as durations, can also be specified (do a web search for “CSS transition”).

There are two ways that you can specify transitions:

1. Adding a transition in the **Extended Properties** list *within* the **Dynamic Styles** section will specify a transition that applies when entering the dynamic (hover, active, or focus) state.
2. Adding a transition in the **Extended Properties** section *immediately above* the **Dynamic Styles** section will specify a transition that applies when entering or leaving the dynamic state. This is probably more common.

Xway’s **Web** view is useful for testing dynamic styles. You can use the keyboard shortcuts **^⌘B** and **^⌘P** to switch quickly between the web and page views.

If you wish to remove a dynamic style that you have defined, you can do so by selecting **Inherit Dynamic Style**.

Popup boxes

Target styles can be used to create popup boxes. The following steps will create a simple popup box:

1. Insert a box, and name it **overlay**.
2. Set its position to be **Fixed**.
3. Delete its width, and set its **Left**, **Right**, **Top**, and **Bottom** offsets to be zero.

4. Give it a semi-transparent background color (e.g. choose **Other** from the **Background Color** popup in the **Background** section of the **Box Inspector**, then type **0** in the **Hex** field and **20%** in the **Opacity** field of the **New Color** dialog).
5. Insert a second box within the overlay box, and name it **popup**.
6. Give this a white background.
7. Set its maximum width to **600px** and center-align it (choose **Center** from the **Align** popup in the **Margins and Alignment** section of the **Box Inspector**).
8. Give it a top margin of **20vh** to position it vertically.
9. Insert some content within the popup box, and add a **close** box: this could be an absolute-positioned box which contains a multiplication symbol (**x**) and is positioned at the top right of the popup box.
10. Set a link to the current page on the **close** box.
11. Select the overlay box and choose **None** from the **Display** popup in the **Style** section of the **Box Inspector**. This removes the overlay box (and its contents) from the page layout.
12. Open the **Dynamic Styles** section of the **Box Inspector**, and choose **Target** from the **Type** popup, then choose **Normal** from the **Display** popup within this section. This causes the overlay box to become visible when it is targeted by a link.
13. The only thing we now need to do is to add a link. You could do this by typing “Show popup box” within the page div, and setting a link from this to the overlay box: select “Show popup box” and link it to the overlay box on the current page.
14. Switch to Xway’s **Web** view, and test that the popup box appears when you click on “Show popup box” and disappears when you click on the close box.

There are other tweaks that can be made, such as adding rounded corners or a shadow to the popup box. To add rounded corners, select the popup box and add an extended property named **border-radius** with a value of (say) **12px**, using the **Extended Properties** section of the **Box Inspector**, immediately above the **Dynamic Styles** section. To create a shadow, you could add an extended property named **box-shadow** with a value of **3px 3px 4px 2px rgba(0, 0, 0, 0.2)**. Do a web search for “CSS box-shadow” for more information on box shadows.

One drawback to using a Display value of None in order to hide the overlay box (and its contents) is that its not possible to fade between None display and Normal display. If you want the overlay box (and contents) to fade from hidden to visible, you can use the Visibility and Opacity properties to do this:

1. Select the overlay box in the Site panel.
2. Open the Display popup (in the Style section of the Box Inspector) and choose Undefined, so that Display reverts to its default setting (Normal).
3. Open the Visibility popup (just above the Display popup) and choose Hidden.
4. Set Opacity to zero.
5. Open the Visibility popup in the Dynamic Styles section of the Box Inspector (while Target is selected as the dynamic style Type) and choose Visible.
6. While in the Dynamic Styles section, set Opacity to 100%, and choose Undefined from the Display popup.
7. To create a transition, add an extended property named transition in the Extended Properties section just above the Dynamic Styles section, and give it a value of all 0.5s. This will create a half-second transition during which the overlay box and its contents fades in (when it is displayed) and fades out (when it is dismissed).

The reason we use both the Opacity and Visibility properties is that opacity is animatable during the transition (creating the fade effect), while hidden visibility hides the box from mouse clicks as well as hiding it from view (allowing users to click on items that are behind the hidden box).

Setting Visibility to Hidden also affects the way that boxes behave in Xway's Page view. It is not possible to select a hidden box by clicking on it in Xway's Page view: mouse clicks pass through the box (as they do in a browser), allowing you to work on contents that are behind the hidden box. However, you can select a hidden box by clicking on it in the Site panel, and if a hidden box is already selected you can use the mouse to move and resize it.

An important difference between hidden visibility and a display value of none is that boxes that have a display value of none are completely removed from the page layout (in Xway and in browsers) while boxes that have hidden visibility take up space but are invisible. This distinction is less important in the case of boxes with absolute or fixed position (since these do not affect the

position of other non-descendent boxes), but it is easily seen with relative-positioned boxes.

Collapsible sections

Target styles can also be used to create collapsible sections that are hidden until they are targeted by a link. This is sometimes known as an accordion effect. A simple way to create this effect is to add a (relative-positioned) box that has a display value of none (choose None from the Display popup in the Style section of the Box Inspector). Link to this box from somewhere else on the page (perhaps immediately above the undisplayed box), and change the box's Target Display value back to Normal (choose Normal from the Display popup in the Dynamic Styles section of the Box Inspector, while Target is selected as the dynamic style type). When a user clicks on the link to this box in a web browser, the box will be displayed. When they click on a different link, the box will be hidden.

Once again (as with popup boxes) we have to do some additional work if we want to add a transition. Using hidden visibility doesn't work in this case, because the relative-positioned box will take up space even if it is hidden, and we probably don't want the content to fade into view. Instead, we can hide (collapse) the box by giving it a maximum height (or width) of zero and setting its overflow property to be hidden. For a box that expands and collapses vertically, set its maximum height to be zero and delete any minimum height that may have been set (using the Dimensions section of the Box Inspector). Then choose Hidden from the Overflow popup in the Style section of the Box Inspector. When you have done this, enter a non-zero maximum height (large enough for the box's content) in the Dynamic Styles section of the Box Inspector, while Target is selected as the dynamic styles type. To add a one-second transition, go to the Extended Properties section immediately above the Dynamic Styles section and add a transition property with a value of all 1s.

Media styles

The Media Styles sections of the Page Inspector and Box Inspector can be used to define alternative styles for small or wide screens. Media styles are output using a CSS mechanism known as "Media queries", which allows style properties to be applied to particular types and sizes of media. Xway allows

you to define styles that are applied when the screen is narrower (or wider) than a defined size, or “breakpoint”. In contrast to Freeway, Xway does not require a pre-defined list of breakpoints. You can choose whatever breakpoint is suitable for a particular property (this is similar to the way that breakpoints are defined for navigation menus).

Be sparing in the use of media styles. It is easier to create and maintain sites that are inherently flexible, and which do not require too many additional adjustments. See below for examples where media styles can be useful.

A media style consists of a breakpoint (defining when the style is applied), a selector (defining the element or elements to which it applies), and a set of properties.

Breakpoints

Breakpoints are pixel measurements that define the point at which a style property (or set of properties) is applied. Xway supports two types of breakpoint: “less-than” breakpoints, which apply to screen widths that are smaller than the breakpoint size, and “greater-than” breakpoints, which apply to widths that are greater than the breakpoint size. The first type of breakpoint is commonly used to define properties that apply to narrower screens, while the second (less common) type can be used to define properties for wide screens.

Note that screen width (in this context) refers to the viewport (or view area) of a browser: this is normally equivalent to the screen width for mobile browsers, but refers to the content width of a browser window, or to the width of a split screen, in other cases.

Normal (“less-than”) breakpoints are shown as simple pixel measurements (e.g. 768px) in Xway, while wide-screen (“greater-than”) breakpoints are displayed as pixel measurements preceded by a greater-than symbol (e.g. > 1500px).

Selectors

Selectors are used to define the element (or elements) to which a style should be applied. Xway allows you to use any valid CSS selector. Commonly used selectors include ID selectors and ID child selectors. ID selectors select elements based on their ID. These are prefixed with a hash (#) symbol: #item1

selects an element that has `item1` as its ID (in the **Name/ID** field at the top of the **Box Inspector**). ID child selectors select children of an element: `#item1 > *` selects any element (*) that is a child of (>) `item1`. If you use the **Box Inspector** to create media styles, Xway displays a popup menu that allows you to choose **Item**, **Children of Item**, or **Descendants of Item**. This automatically generates the appropriate selector.

Note: If you change a box ID after setting up a media style, Xway will automatically update the ID used by the media style.

Properties

Media properties are the properties that are applied to a selected element (or elements) below (or above) a defined breakpoint. These are defined in the same way as **Extended Properties**, by entering a property name and value. If you wanted to change the minimum width of a box, you would enter `min-width` as the (CSS) name of the property and (e.g.) `300px` as the value.

Using media styles

Media styles are listed in the **Media Styles** sections of the **Page Inspector** and **Box Inspector**. The **Page Inspector** lists all media styles that are defined for a page (or pages), while the **Box Inspector** lists media styles that are associated with a box (or several boxes). Media styles are listed in a table view with three columns: **Selector**, **Breakpoint**, and **Properties**. They can be sorted by selector or breakpoint: click on the table headers to change the way that they are sorted in the UI (this has no effect on the way that they are output).

*Note: The list of media styles can be scrolled vertically and horizontally. You can also increase the size of the table view by increasing the width of the **Inspector** panel from its default size.*

The easiest way to create a media style is to open the **Media Styles** section of the **Box Inspector** and click on the plus button below the list view. This displays a dialog that allows you to define a selector, breakpoint, and set of properties. If you want a style to apply to the current box, open the popup menu to the right of the **Selector** field, and choose **Item**. If you want a style to apply to children or descendants of the current box, choose **Children of Item** or **Descendants of Item** from the popup menu. Xway will automatically enter the appropriate selector, using the currently selected box's ID. It is also possible to add or edit media styles for multiple boxes, so long as the styles are identical

except for the box IDs used in the selectors (box IDs are unique to each box). In this case, Xway displays `#[boxID]` as a placeholder for the actual box IDs.

To edit an existing media style, click on the pencil button below the list view, or press **Return** when a style is selected, or double-click on a style. To remove a style, click on the minus button or press **Backspace** when a style is selected.

Note: If you add or edit a media style so that it has the same selector and breakpoint as another media style, Xway merges the two styles.

*Note: If you add or edit a media style in the **Media Styles** section of the **Box Inspector**, the **Selector** field must contain the box ID (or box ID placeholder) for the currently selected box(es).*

To set a breakpoint, enter an appropriate pixel measurement in the **Breakpoint** field of the **Media Style** dialog. The easiest way to determine an appropriate breakpoint is to start by choosing an approximate value, and see how this works for different screen widths. This is similar to the way that you might choose a menu breakpoint. To create a “greater than” breakpoint (for wide screens) enter a “greater than” symbol (`>`) before the measurement. Safari’s **Responsive Design** mode is a helpful way to test breakpoints: see [Testing responsive layouts](#) (page 194).

To add or remove a property, click on the plus or minus button in the **Media Style** dialog.

To view all the media styles that are applied on a page (not just the styles that are applied to particular boxes), open the **Media Styles** section of the **Page Inspector**. This also contains a **Use Master Media Styles** checkbox, which can be used to reset media styles so that they match the styles that are used on a master page.

One situation in which media styles may be useful is to shrink the size of headings that are too large for their container box on small screens:

1. Select the box that contains the heading.
2. Open the **Media Styles** section at the bottom of the **Box Inspector**.
3. Click on the plus button, to display the **Media Style** dialog.

4. Choose Children of Item or Descendants of Item from the Selector popup. This creates a CSS selector that targets children or descendants of the container.
5. To target a specific heading, without affecting other text elements, replace the asterisk (meaning “any child”) in the CSS selector with a heading tag (h1 for Heading 1, h2 for Heading 2 etc.). For example, `#item1 > h1` targets any h1 (Heading 1) element that is a child of `#item1`.
6. Set a breakpoint that represents the screen width below which a smaller heading size needs to be used.
7. Click on the plus button at the bottom of the Media Style dialog, and enter font-size as the property name and an appropriate size as the property value.

For situations in which media styles can be usefully added to flex layouts, see *Flex layout and media styles* (page 191).

Measurements

Style properties, such as width, height, font size, and many others, are defined using measurements. Xway supports most types of CSS measurement (except currently: exes). These can be categorized as absolute and relative measurements.

Absolute measurements

Absolute measurements have a fixed size. They include:

- pixels (px) : there are 96 CSS pixels to an inch
- points (pt) : there are 72 points to an inch
- picas (pc) : there are 12 points to a pica
- inches (in)
- centimeters (cm)
- millimeters (mm)

Note that points are not the same as pixels in CSS.

Relative measurements

Relative measurements are defined in relation to some other style property, such as the width or height of a parent box.

- percent (%)
- ems (em) : a ratio of the current font size (1em is traditionally the size of an uppercase M)
- rems (rem) : a ratio of the root font size (normally 16px)
- vh : 1% of the viewport height
- vw : 1% of the viewport width
- vmin : 1% of the viewport width or height (whichever is smaller)
- vmax : 1% of the viewport width or height (whichever is greater)

Here, “viewport” is the content area of a browser window.

Relative measurements are useful for flexible layout. If you wish to define the width of a box, it is generally better to define it as being a percentage of the width of its parent than to define it with a fixed measurement (unless you want it to have a fixed, inflexible size). On the other hand you might want to use absolute measurements to define maximum or minimum widths.

Ems are useful for text properties. For example, it makes sense that a paragraph indent should be defined in relation to the current font size (e.g. 1em), so that it will adapt if the font size changes.

Measurement units normally default to pixels (or sometimes ems) when typing in an empty field, or to the previous unit when replacing an existing value.

Zero values are output without an accompanying unit, following common practice (zero is the same for all measurements).

Style properties

This is a general reference for style properties that can be applied within Xway. Since many of these properties can be applied to different types of element, and appear in different places in the Inspector panel, they are listed here in alphabetical order.

Extended style properties are discussed in [Chapter 13: Markup](#).

Alignment

The Align control can be used to set the alignment of paragraphs (and other text blocks): left, center, right, or justify. You can also leave this undefined by not selecting any of the buttons.

Background

Background colors and images can be added using the Background section in the Box and Page Inspectors.

Background color

The Background Color popup can be used to set the background color of a page or box. You can choose from a list of colors that already exist within the document, or you can choose another color by selecting **Other**.

A special value that can be used for background colors is **Transparent**. This indicates that an element does not have a background color (its background is transparent). This is the default value.

See [Working with colors](#) (page 119) for more information on colors.

Background image

The Background Image popup can be used to set the background image of a page or box.

Note: It's possible to use SVG graphics as background images, but Xway currently draws a placeholder rather than the actual SVG.

Background clip

The Background Clip popup defines the area in which a background color or image is drawn. The default option, **Border Area**, draws a background over the whole area of a box, including its border (backgrounds are drawn behind borders). **Padding Area** causes the background to be drawn in the content and padding areas (excluding any border), and **Content Area** causes the background to be drawn in the content area only (excluding border and padding). This option is not available for page backgrounds (in CSS or Xway).

Background origin

The Background Origin popup defines the origin of a background image. **Border Area** means that it is positioned in relation to the outer (border) edge of a box. **Padding Area** (the default option) means that it is positioned in relation to the padding edge. **Content Area** means that it is positioned in relation to the content edge. The easiest way to see the difference is to add a border and padding, and turn off horizontal and vertical repeat. This property is not available for page backgrounds.

Horizontal repeat

Horizontal repeat determines whether a background image is repeated (tiled) horizontally. Options include **None** (the image is not tiled), **Repeat** (the image is tiled), **Round** (the image is tiled and scaled so that it is repeated an exact number of times), and **Space** (the image is tiled and spaced so that it is repeated an exact number of times).

Vertical repeat

Vertical repeat determines whether a background image is repeated (tiled) vertically. Options include **None** (the image is not tiled), **Repeat** (the image is tiled), **Round** (the image is tiled and scaled so that it is repeated an exact number of times), and **Space** (the image is tiled and spaced so that it is repeated an exact number of times).

Attachment

The Attachment popup determines the scrolling behavior of a background image. **Scroll** (the default option) causes a background to be scrolled with the rest of the window content. **Fixed** causes it to be fixed in relation to the viewport (window or screen), so that other content scrolls past it. **Local** causes it to be scrolled along with any content that is in the object to which it is applied—if that content is scrollable. An example of scrollable content is when a box contains overflowed content and **Overflow** is set to **Scroll**.

Horizontal position

This determines where an image is positioned horizontally (before any tiling is applied) in relation to its origin (see above). Options include: **Left**, **Center**, **Right**, or any measurement value (10px, 25% etc.) **Left** is equivalent to 0%, **Center** is equivalent to 50%, and **Right** is equivalent to 100%.

Vertical position

This determines where an image is positioned vertically (before any tiling is applied) in relation to its origin (see above). Options include: **Top**, **Center**, **Bottom**, or any measurement value (10px, 25% etc.) **Top** is equivalent to 0%, **Center** is equivalent to 50%, and **Bottom** is equivalent to 100%.

Background size

This determines the size of a background image. **Auto** (the default option) means that an image is displayed at its intrinsic (natural) size. Two other options are **Contain** (the image is scaled so that it fits within its box or page) and **Cover** (the image is scaled so that it covers the box or page. You can also use standard measurement values: 100px means that an image is scaled to be 100px wide, and 50% means that it is scaled to half the width of its parent (box or page).

Borders

Borders can be added using the **Borders** section in the **Box Inspector**. **Border** buttons allow you to add or remove a single uniform border or separate (left/right/top/bottom) borders.

Option-clicking on the single border button when it is currently selected will convert a single border into separate borders (whose values are the same as the single border's values). Option-clicking on this button when it is not selected will convert separate borders that have the same values into a single border. Option-clicking on a separate border button when it is not selected will duplicate the values of other borders if they all have the same values.

Note: There is no difference on output between a single border and four separate borders that have the same values.

Border style

Border styles can be set using standard CSS values (none, dotted, dashed, solid etc.)

Note: Non-solid borders may be drawn differently by different browsers (e.g. dotted borders may be drawn with square or round dots).

Borders whose style is set to **None** are not drawn and have zero width (whatever their **Width** is set to). The main reason that border style might be set to **None** is to remove a border that has been applied elsewhere (e.g. through a default style). Unless you need to specify the absence of a border in this way, a border can simply be removed using the **Borders** control.

*Note: More specifically, a border that is removed using the **Borders** control will not be output, while a border that is set to **None** will be output with a border-style value of **none**.*

Border color

Borders can be any color.

Border width

Borders can be any non-negative width, although Xway currently sets a maximum limit of 100. Borders can be defined using any standard CSS length unit, or as **thin**, **medium**, or **thick** (typically 1px, 3px, and 5px).

CSS does not allow border widths to be defined as percentages.

In contrast to Freeway, Xway uses the border-box model (box bounds include borders and padding), so borders are drawn inside the bounds of their box. This makes it easier to align boxes and position them in other ways.

Capitalization

The **Capitalization** popup allows you to transform text so that it is presented in uppercase, lowercase, or with capitalization applied to the first letter of each word. Choosing **None** causes text to be presented without any transformation.

Corners

Rounded corners can be added using the **Corners** section of the **Box Inspector**. At the top of this section, a row of buttons allows you to add or remove a corner definition for all four corners of a box, or have separate definitions for each corner.

Option-clicking on the four-corners button when it is currently selected will convert a single corner definition into separate corner definitions, whose values are the same as the single definition values. Option-clicking on this

button when it is not selected will convert separate corner definitions that have the same values into a single corner definition. Option-clicking on a separate corner button when it is not selected will duplicate the value of other corner definitions if they all have the same value.

Note: There is no difference on output between a single corner definition and four separate corner definitions that have the same values.

*Note: Rounded corners are output using the CSS **border-radius** property. This is misleadingly named, since rounded corners can be applied to any box, regardless of whether it has a border.*

Radius

A corner is defined by its radius. Square corners have a zero radius, while rounded corners have a non-zero radius. A corner's radius can be defined using any CSS measurement unit, including percentages. It's also possible to create elliptical corners by defining a separate vertical radius. Vertical radii are assumed to be the same as horizontal radii if they are not defined separately.

Percentage measurements are calculated from the width and height of a box (including any borders). A single radius value of 50% will create an oval box.

Clipping

Content boxes (such as images) are clipped by corners, but container boxes are not clipped, unless **Overflow** is set to **Hidden** (in the **Style** section of the **Box Inspector**). **Padding** can be used to inset text so that it is contained within a box's corners.

You might want to avoid excessively rounded corners with text boxes, because this will reduce the area within which text can be fitted. On the other hand, setting a corner radius to 50% on image boxes is a useful way to create oval and circular images.

Dimensions

The dimensions and min/max dimensions of boxes are determined by their width, height, min-width, min-height, max-width, and max-height. See [Box dimensions](#) (page 60) for more detailed discussion.

Display

The Display popup controls whether a box is displayed normally, or whether it is removed from the page layout. Setting Display to **None** will remove a box from the page layout. This can be used to create popup boxes that are hidden until their display is reset by a dynamic style property. See [Popup boxes](#) (page 95) for more information on popups.

*Note: In Xway, you can select undisplayed boxes in the **Site** panel, but you cannot select them by clicking in the **Page** view (they are removed from the page layout).*

First line indent

The First Line Indent field is used to set the amount by which the first line of a paragraph is indented. The default value is zero. Printed paragraphs are typically indented by 1em. It is also possible to use negative indents, but you might want to offset this by using a corresponding positive value for the left margin—in order to prevent the first line from overhanging its parent box. Xway is unable to display overhanging negative indents, and they may be clipped in browsers if overflow is not set to visible on the parent box.

You can also use a percentage value, which is calculated from the width of the paragraph or its parent box.

Flex container

The Flex Container checkbox is used to convert standard container boxes into flex container boxes, and vice versa. See [Chapter 16: Flexbox](#).

Flow root

The Flow Root checkbox allows you to set inflow boxes to be the root of the current flow context. This outputs `display:flow-root`, and prevents the top and bottom margins of inflow boxes from collapsing with the top and bottom margins of their parent boxes. This is supported by almost all modern browsers, including Safari (version 13 and higher). This option is not needed for absolute-positioned boxes (they are already flow roots).

See [Collapsing margins](#) (page 112) for a more detailed discussion of collapsing margins.

*Note: If you are running Xway under macOS 10.14 (Mojave), there may be a discrepancy between Xway's **Web** view (which uses WebKit) and Safari. Older versions of WebKit don't support flow-root.*

Font

The Font popup allows you to choose the font that is used for text.

You can choose from a list of fonts that already exist within the document: this includes CSS generic fonts (serif, sans-serif etc.), and typically also includes Times, Helvetica, and Courier. You can also choose any other font by selecting Other from the Font popup.

See [Working with fonts](#) (page 120) for more information on fonts.

Font style

The Font Style popup allows you to choose a font style. There are three options: Normal, Italic, and Oblique. Italic and oblique fonts are slanted, and italic fonts also have cursive letter shapes. Unless a font exists in both italic and oblique styles, choosing Oblique may cause an italic font to be used (and vice versa). If a font does not provide an italic or oblique version, Xway (and browsers) will display slanted roman text.

Font variant

The Font Variant popup allows you to choose between Normal and Small Caps. Small Caps causes lowercase text to be displayed using small caps (while uppercase text will continue to be displayed using normal caps). Most fonts do not contain a defined set of small caps (Didot is an exception), so small caps are usually synthesized by browsers (and by Xway). Small caps can be combined with capitalization: e.g. using Capitalize and Small Caps together will cause the first letter of each word to be displayed with a full-size cap.

Letter spacing

The Letter Spacing field can be used to set letter spacing: 0.25em is an appropriate value for adding emphasis, and will increase spacing between letters by an amount that is dependent on the current font size.

Letter spacing cannot be defined using percentages.

Line height

The Line Height field is used to set line height (leading). It's generally best to use a factor (1, 1.2 etc.) rather than a measurement (10px, 1em, etc.). You can also use `normal`—which corresponds to a factor of around 1.15. If line height is undefined, CSS uses `normal` as the default value.

If you previously set a measurement in this field, you can specify factor by typing `f` after the factor value (otherwise, in the absence of a measurement unit, Xway would default to the previous measurement unit).

List marker

The List Marker popup in the List Inspector can be used to set the type of marker that is prefixed to list items. See [List marker](#) (page 76) for more information.

Margins

Margins can be applied to boxes and paragraphs (and other text blocks). Percentage values are calculated in relation to the width of the containing box (for both horizontal and vertical margins).

*Note: Negative margins can be used to create overlapping layouts, but there are some limitations that affect Xway's **Page** view (see below). These are a consequence of the fact that the macOS text views which Xway uses in its **Page** view do not support negative space between paragraphs.*

Box margins

Margins can be applied to container boxes and to content boxes (in the Margins and Alignment section of the Box Inspector). There is a special margin value (`auto`) that can be used to left-align, right-align, or center-align inflow container boxes, and there is an **Align** popup that provides an easy way to set this value.

Negative margins can be used to create overlapping layouts. It's best to avoid having text after boxes with negative vertical margins, because it will be offset from its correct position (in Xway's **Page** view). You can work around this by placing the text in a separate box.

Paragraph margins

Paragraph margins can be set in the Paragraph Inspector. Negative margins can be used to remove space between paragraphs, but Xway's Page view does not display overlapping paragraphs (although this is supported by most browsers).

List margins

List margins can be set in the List Inspector. Negative margins can be used, but Xway's Page view does not display overlapping lists.

Collapsing margins

Vertical (top and bottom) margins collapse. In the case of paragraphs, this means that the bottom margin of a paragraph will overlap with the top margin of a following paragraph, and the two paragraphs will be separated by whichever margin is greater. If no margins are specified, browsers typically use a default value of 1.2em for vertical paragraph margins.

Collapsing margins are a useful feature in many situations. The distance between two paragraphs is typically calculated by taking the greater of two values: if the first paragraph has a bottom margin of 12px and the second paragraph has a top margin of 6px, the distance between the two paragraphs is 12px (maximum value) rather than 18px (combined value).

However, collapsing margins are more complex than this, and there are cases where their behavior can be unexpected and annoying. For example, if you insert a box or paragraph on an empty page and give it a top margin of 10px, its margin will collapse with the margin of its parent (the page div) and the margin will appear to be added to the page div rather than the box or paragraph within the page div.

There are ways to prevent this collapse from happening (in Xway and in browsers), such as:

1. Set the parent item's overflow to not be Visible
2. Give the parent item a border or some padding
3. Give the parent item a display value of flow-root. This can be done in Xway by selecting the Flow Root checkbox in the Style section of the

Box Inspector. This last option is supported by most modern browsers—including recent versions of Safari (13 upwards).

Xway displays collapsed margins as they appear in a browser.

Marker position

The Marker Position popup in the List Inspector can be used to set the type of marker that is prefixed to list items. See [Marker position](#) (page 77) for more information.

Offsets

Absolute-positioned boxes may have offsets (left, right, top, and bottom) that allow them to be positioned in relation to their parent. See [Box offsets](#) (page 61) for more information on offsets.

Opacity

The Opacity popup can be used to control the opacity (non-transparency) of a box. Note that it is also possible to use semi-transparent colors.

Overflow

The Overflow popup can be used to control the overflow behavior of a box. When overflow is set to hidden, boxes clip their content (including child boxes) to their bounds.

Note: Overflowed text is also displayed in the bottom padding area when the box's overflow is not Visible.

Padding

Padding can be added to boxes via the Padding section of the Box Inspector. Percentage values are calculated in relation to the width of the containing box (both horizontal and vertical padding).

Position

The way in which boxes are positioned on the page is controlled by their CSS Position. See [Box position](#) (page 58) for a more detailed discussion.

Scroll behavior

Select Smooth Scrolling in the Style section of the Page Inspector to turn on smooth scrolling behavior. This specifies that browsers should transition smoothly when following a link to another location on the same page, instead of jumping instantaneously.

Size

The Size control allows you to choose the font size of a span or paragraph. You can do this by typing a measurement (24pt, 36px, 1.2em, medium) or by choosing from a popup menu. CSS values correspond (approximately) to the following pixel sizes: xx-small = 9px, x-small = 10px, small = 13px, medium = 16px, large = 18px, x-large = 24px, xx-large = 32px, smaller = 0.83 (1/1.2) of current font size, larger = 1.2 of current font size.

Visibility

The Visibility popup allows you to determine whether a box is visible or hidden. Hidden boxes are hidden from view and are also hidden from user interaction (mouse clicks fall through to whatever is behind them), but they are still part of the page layout and take up space on the page. By contrast, a box whose Display is set to None is removed from the page layout and does not take up space on the page.

Hidden visibility can be used to create popup boxes that are hidden until they are made visible via a dynamic style property. See [Popup boxes](#) (page 95) for more information.

Note: In Xway, you can select hidden boxes in the Site panel, but you cannot select them by clicking in the Page view—clicks fall through, as they do in web browsers. This allows you to work more easily on content that is behind a hidden box. However, if a hidden box is already selected in Xway, it is possible to use the mouse to move or resize it.

Weight

The Weight popup allows you to choose font weight. There are a number of options: Normal, Bold, Bolder, Lighter, and a set of numerical options (100, 200, 300, 400, 500, 600, 700, 800, 900) where 100 is the lightest available weight

and 900 is the boldest (normal is defined as 400 on this scale, and bold is defined as 700). Most fonts have a more limited number of weights (such as normal and bold, or perhaps only normal), but some fonts have various bold and light weights (Light, Book, Bold, Extra Bold etc.)

Text color

The Text Color popup allows you to choose a text color.

You can choose from a list of colors that already exist within the document, or you can choose another color by selecting **Other**.

See [Working with colors](#) (page 119) for more information on colors.

Text decoration

The Text Decoration control allows you to choose between Underline, Line-Through, and Overline.

Overline isn't currently displayed within Xway (it's not directly supported by Apple's Cocoa framework), but it is still output.

Text decoration is drawn in the color of the element to which it are applied. “Hello *new* world” will display a black underline under “new” if underlining is applied to “Hello new world”, and a red underline under “new” if underlining is also (separately) applied to “new”.

Vertical alignment

The Vertical Align popup in the Margins and Alignment section of the Box Inspector allows inline graphics to be vertically aligned.

There are various options:

- Measurement value: e.g. type 5px to align the bottom of a graphic 5 pixels above the current baseline, or -5px to lower the bottom of the graphic by 5 pixels. You can also use percentage values: e.g. type 10% to raise the bottom of the graphic by 10% of the current line height.
- Top, Text Top: align the top of the graphic with the top of the current line (Top) or with the top of the text that contains the graphic (Text Top)

- **Middle:** align the middle of the graphic with the middle (x-height) of the text that contains the graphic.
- **Baseline:** align the bottom of the graphic with the baseline of the text that contains the graphic
- **Bottom, Text Bottom:** align the bottom of the graphic with the bottom of the current line (**Bottom**) or with the bottom of the text that contains the graphic (**Text Bottom**)
- **Super, Sub:** align the bottom of the graphic at the position used for superscripts or subscripts (within the text that contains the graphic).

Z-index

The z-index of a box controls its front-to-back order on a page. The rules for front-to-back stacking in HTML and CSS are complicated, and it is usually simplest to allow items to be stacked according to their normal order, and leave z-index undefined unless it is needed for a particular reason.

Elements in an HTML page are normally stacked according to their HTML position (elements that appear earlier in the HTML are stacked behind elements that appear later), unless they are given a z-index—in which case items with a higher z-index are stacked in front of items with a lower z-index that occur in the same stacking context. An item with a z-index of -1 will be stacked behind an item with no z-index or with a z-index of zero if both items are in the same stacking context.

The default stacking context is the page, but items that have a z-index (of any value), or an opacity that is less than 100%, create a new stacking context. A stacking context behaves as a unit—all the items in a stacking context (the root element and its children) are stacked together and cannot be interleaved with items from other stacking contexts.

If an item with a z-index of -1 is the child of an item with no z-index, the child item will be stacked behind its parent (since both occur in the same stacking context). But if the parent is given a z-index of 0, or is made partially transparent, this creates a new stacking context, and it is not possible for the child to be stacked behind its parent—since the parent is now the root (first item) of the stacking context in which the child is stacked.

Xway follows these rules, so that items on an Xway page are stacked in the same way that they appear in a browser.

Chapter 8: Colors and fonts

Working with colors

Xway defines a small number of default colors, and also allows you to choose any other RGB or RGBA color. RGBA colors contain an alpha (opacity) component that allows them to be semi-transparent.

Choosing colors

You can choose colors by selecting them from a color popup. If the color is not listed in the popup, you can choose a new color by selecting **Other**. This displays a **New Color** dialog, where colors can be chosen by name (e.g. by typing any standard CSS color name (e.g. *Alice Blue*, or *Beige*), or by hex value, or from a color picker.

Note: Colors are automatically matched to CSS color names if you haven't explicitly selected a color (using a color picker or by typing a hex value). If you have selected a color, you can revert to automatic color matching by deleting the hex value. Conversely, names are automatically matched to colors if you haven't explicitly set a name, and you can revert to automatic name matching by deleting the name.

The **New Color** dialog can be used to choose semi-transparent colors: there is an **Opacity** text field, and the color picker displays an **Opacity** slider. The names of semi-transparent colors include a percentage value indicating their opacity (*Yellow 50%*, *Purple 25%* etc.)

Editing colors

The **Colors** view allows you to edit colors that are used in a document. Colors can be permanent or temporary (as in *Freeway*). Permanent colors are added to a document and are always available. Temporary colors are applied to elements, and are available so long as there are elements to which they are applied.

Note: Temporary colors are not always removed immediately. If they are not used within the document, but are applied to objects that exist in the undo stack (and can be

brought back by undoing or redoing), they are retained until they are no longer needed. Colors that are used by objects in the undo stack, but are not used in the document, will be removed when the document is saved and reopened.

Most colors can be edited, but a small number (black, white, red, lime, blue, cyan, magenta, and yellow) are fixed (not editable).

Hex values can be entered as a single character (c becomes cccccc, etc.), two characters (c0 becomes c0c0c0), three characters (abc becomes aabbcc), or six characters.

Working with fonts

Choosing fonts

You can choose fonts by selecting them from a font popup. If a font is not listed in the popup, you can choose a new font by selecting **Other**. This displays a **New Font** dialog, where fonts can be chosen by name (e.g. Optima) along with alternative fonts (e.g. Helvetica, Arial) and a generic fallback (e.g. sans-serif). This is similar to font sets in Freeway, except that you do not have to choose a screen font because the screen font is automatically matched. If you choose a font that is not present on your system, Xway uses one of the alternative fonts to display it (as happens in browsers).

Xway also allows you to use web fonts by specifying a font URL. Google provide a wide selection of web fonts at <https://fonts.google.com/>

To use a Google font, copy the URL that Google provide and paste this in the URL field of the **New Font** dialog. The URL is the string that follows href= (without the quotation marks). In the case of Lato:

1. Enter Lato as the name of the font
2. Choose Sans-serif as the font type
3. Paste <https://fonts.googleapis.com/css?family=Lato> in the URL field

Alternatively, for Lora (a serif font):

1. Enter Lora as the name of the font
2. Choose Serif as the font type

3. Paste <https://fonts.googleapis.com/css?family=Lora> as the URL

Note: In many cases, you can copy font URLs with surrounding text and Xway will extract the URL from the surrounding text.

If you also wish to use the italic version of Lora (instead of a slanted version), you can use the following URL to specify both regular and italic styles of this font:

<https://fonts.googleapis.com/css?family=Lora:italic>

In order to make a font available on your system for Xway to use, you can download it (by clicking on Google's download icon) and install it using Apple's Font Book application: double-clicking on a font file (or selecting one or more files and choosing Open from the File menu) will open it in Font Book.

System fonts and web fonts

System fonts are fonts that are available by default, while web fonts are fonts that have to be downloaded. Web fonts provide a greater degree of choice, but they take time to load and users may disable them within their browsers. If you use web fonts, it's important to provide alternatives that look reasonably similar.

Xway defines a number of font families that are available (or have similar alternatives) on macOS, iOS, Windows, Linux, and Android. These include:

1. Serif fonts: Charter, Didot, Georgia, Palatino, and Times
2. Sans-serif fonts: Avenir, Gill Sans, Helvetica, Optima, Trebuchet MS, and Verdana
3. Cursive fonts: Bradley Hand
4. Monospaced fonts: Courier New and Menlo

For more information on system fonts, see Apple's [System Fonts](#), which lists fonts that are available on macOS and iOS etc.), and [Modern Font Stacks](#), which provides a typographical classification of font families that are available across different systems.

Editing fonts

The Fonts view allows you to edit fonts that are used in a document. Fonts, like colors, can be permanent or temporary. Permanent fonts are added to a

document and are always available. Temporary fonts are applied to elements, and are available so long as there are elements to which they are applied.

Note: Temporary fonts are not always removed immediately. If they are not used within the document, but are applied to objects that exist in the undo stack (and can be brought back by undoing or redoing), they are retained until they are no longer needed. Fonts that are used by objects in the undo stack, but are not used in the document, will be removed when the document is saved and reopened.

Chapter 9: Resources

Working with resources

Resources are graphics, videos, audio files, and other content that is added to a page.

Resources may be local or external. Local resources exist in local storage (e.g. on a local drive or network) and are output by Xway. External resources exist online, and are referenced (but not output) by Xway.

Adding resources

You can add a resource to a page by choosing a resource type from the **Insert** menu or by clicking on a resource button in the **Toolbar**. In addition to separate commands for inserting graphics, videos, and audio files, there is also a general **Insert Resource** command for inserting any kind of resource, including external resources.

Resources are inserted at the current text selection (if there is one), or after the currently selected item (if there is one), or after other items in the page div.

Xway stores and outputs a single resource if the same resource is imported multiple times.

Note: Xway copies imported resources to a Resources folder within the document package. This provides a backup copy that is used if the original resource becomes unavailable (e.g. if it is deleted) at a later date. [Freeway also copies graphics to its documents, but it stores them at a lower resolution, as preview images.]

Editing resources

The **Resources** view allows you to edit resources that are used in a document. Resources, like colors and fonts, can be permanent or temporary. Permanent resources are added to a document and are always available. Temporary resources are applied to elements, and are available so long as there are elements to which they are applied.

Note: Temporary resources are not always removed immediately. If they are not used within the document, but are applied to objects that exist in the undo stack (and can be brought back by undoing or redoing), they are retained until they are no longer needed. Resources that are used by objects in the undo stack, but are not used in the document, will be removed when the document is saved and reopened.

Custom resources

The **New** button in the **Resources** view can be used to add any file as a permanent resource. Permanent resources are always published, regardless of whether they are directly referenced from any page. Stylesheets are published in a site's **css** folder, scripts are published in the **scripts** folder, and other resources are published in the **resources** folder.

Resource information

Information about resources is displayed in the **Resources** view, and in the **Content** section of the **Box Inspector**. This information includes:

File: the name that will be used when a resource is published. This may be the same as the original file name, but it may also have been changed if there is another resource with the same file name, or if the original file name contains characters that Xway disallows. The **Resources** view allows you to change the name that is used.

*Note: If you delete the file name (in the **File** field of the **Resources** view), Xway will regenerate a name that is based on the original file name (if there is an original file). If you want to replace a long or cryptic file name with an automatically chosen numeric name, you can do this by entering a single space character in the **File** field.*

Path: the full path to the original file (if there is an original file) or to an external resource. If the original file is missing or inaccessible, the path is shown in gray.

*Note: You can select the original file path by dragging the mouse over it or triple-clicking on it. Once you have selected it, you can control-click (or right-click) on it, and choose **Show in Finder** or **Open** from the **Services** submenu. This is useful if you wish to edit the original resource in another application.*

Status: this displays the file status. Possible values are: **OK** (the file is available), **Missing** (the file is missing), **Inaccessible** (the file is not missing but

it cannot be accessed, e.g. for sandboxing reasons), and Unreadable (an external resource is unavailable or unreadable).

Note: Resources whose original file is missing or inaccessible can be reconnected with an original file or detached from their original file (see below). Sandboxing is a technology that prevents applications from accessing files that they do not have permission to access.

File Type: the file type of the resource, e.g. PNG, JPEG, GIF, WebP, SVG, MP4 Video, MP4 Audio, and so on.

File Size: the size of the resource (not shown for external resources).

Creation Date: the creation date (not shown for external resources).

Modification Date: the modification date (not shown for external resources).

Size: the size of a resource in pixels (where this is applicable).

Type: this column in the **Resources** view shows the general type of a resource (Graphic, Video, Audio, or Other).

Kind: this column in the **Resources** view indicates whether a resource is local, external, or detached. See [Detached resources](#) and [External resources](#) (below) for more information on detached and external resources.

If you want to sort resources by kind, or size, or any other property that is listed in the **Resources** view, you can do so by clicking on the header for that column.

Locating resources

If a resource is shown as missing or inaccessible, you can locate it by clicking on the **Locate** button in the **Resources** view or in the **Content** section of the **Box Inspector**.

When you are locating a resource, Xway allows you to choose a folder that contains the resource. You don't have to choose the actual resource file (although you can if you wish): if you navigate to a folder that contains a resource with the correct name, Xway will enable the **Locate** button and you can press **Return** to locate the resource. This makes it easier to locate files without having to memorize and look for a matching file name. If you choose a folder instead of an actual resource file, Xway will also locate any other

missing or inaccessible resources that are in this folder (so long as they were previously in the same folder as the resource you are locating).

Note: If a resource is shown as inaccessible, Xway will automatically navigate to the folder that contains the resource when it displays a file dialog: it knows where the resource is, but cannot read it until you give permission by choosing it or the folder that contains it.

Replacing resources

The **Replace** button in the **Resources** view allows you to replace a resource with a different resource of the same kind: e.g. you can replace a graphic with a different graphic, or you can replace a video with a different video. If you replace a resource in this way, the new resource will replace the old resource wherever it was used.

*Note: If you replace a web graphic with a non-web graphic (such as a PDF or TIFF image) Xway will convert the non-web graphic to a web graphic. However, if you are replacing a non-web graphic (which might be used as a link resource), Xway will not convert it to a web graphic—although you can force it to do this by holding down the **Option** key.*

Replacing content

You can replace the content of a resource box by clicking on **Replace** in the **Content** section of the **Box Inspector**. This is different from replacing a resource in the **Resources** view: it replaces the content of the selected box(es), but does not replace the resource in other cases where it is used. You can replace resource content with another resource that does not have to be the same kind of resource (e.g. you can replace a graphic with a video, or a local resource with an external resource, etc.)

*Note: Locating or replacing a resource does not automatically update box IDs to match the resource name (if it is different). If you want Xway to generate a new ID that is based on the resource name, you can do this by clearing the **Name/ID** field or by typing a space in this field (typing a space allows you to generate a new ID for multiple resource boxes).*

Detaching resources

If the original file is no longer available, you can click on the **Detach** button (in the **Resources** view or in the **Content** section of the **Box Inspector**) to detach the resource so that it is no longer attached to the original file.

Note: You can also detach resources whose original file is still available. One reason for doing this is if you plan to make an Xway document available to people who do not have access to the original resource files. In this case you could duplicate the Xway document and detach resources in the duplicated copy.

Detached resources

Detached resources (resources that do not reference a file outside the document package) are resources that a user has detached from their original file (e.g. by clicking on **Detach** in the **Content** section of the **Box Inspector**) or that Xway has automatically detached when the resource was imported.

Xway automatically detaches images that do not reference an original (and locally available) file or are not in a web format (JPEG, PNG, GIF, WebP, or SVG) when they are imported or pasted.

Modified resources

Resources whose original file is modified (e.g. in an external editor) are automatically updated within Xway. Resources are considered to be modified if their file size, creation date, or modification date has changed.

Recent resources

Popups for choosing resources include recently used resources. Xway keeps separate lists of (up to 10) recent link resources, recent images, recent videos, and recent audios.

Graphics

Graphics can be added by choosing **Graphic** (or **Resource**) from the **Insert** menu or by clicking on the **Insert Graphic** (or **Insert Resource**) tool in the **Toolbar**. You can also paste graphics that have been copied from other applications.

If you copy the address (or location) of an image from a web browser, the pasted image will be identical to the original image (Xway downloads it and copies it into the document). To copy an image address (or location) from a browser, control-click on the image and choose **Copy Image Address** (or **Copy Image Location**). In Safari, you can also choose **Copy Image** (Safari copies both the address and the image to the pasteboard, and Xway uses the address).

Note: If the same graphic is pasted multiple times, Xway creates a single resource rather than duplicate resources.

Graphics that are not in a web format (JPEG, GIF, PNG, WebP, or SVG) are converted to a web format when they are imported: JPEG if the graphic does not contain transparent pixels, or PNG if it does.

Graphics that are not in a web format, and most pasted graphics, are imported as detached graphics (they do not have an original file that is locally available). One exception to this is that if you copy and paste a web graphic from the Finder, Xway will keep a reference to the original file (copying and pasting from the Finder is the same as importing via a file dialog in this respect).

WebP graphics

Xway supports WebP as a native web format if it is running under macOS 11 or greater. WebP graphics are supported by modern browsers, but there is limited support in older browsers. Apple added support for WebP in macOS 11 and in Safari 14+ (on iOS and on macOS 11+). WebP graphics tend to have smaller file sizes than equivalent JPEG graphics, and the WebP format supports alpha transparency (unlike JPEG).

*Note: You can force WebP graphics to be converted to JPEG or PNG format by holding down the **Option** key while importing or pasting.*

Alt. text

Alt. text (alternative text) is used to describe the appearance and function of images. This is important for accessibility: screen readers use alt. text to describe images to visually impaired users. You can use the **Alt. Text** field in the **Box Inspector** to define alternative text. If an image is purely decorative, alternative text should normally be left blank.

Videos

Videos can be added by choosing Video (or Resource) from the Insert menu or by clicking on the Insert Video (or Insert Resource) tool in the Toolbar. Different browsers support different video formats (Safari does not support videos in webm or ogg format, and other browsers may not support H.265), but most modern browsers support mp4/m4v (H.264) videos.

Xway expects imported videos to be in an Apple-supported format, such as mp4 (m4v), so that it can determine the size and display a preview—but you can add other formats as alternative sources (see below).

Note: Video files can be quite large in size, so you should generally avoid adding local video resources to your document, unless they have small file sizes. A better alternative for large video files is to use external video resources. These can be videos that you have uploaded separately (or that are available online), or YouTube/Vimeo videos that you have added within an iframe. See [External resources](#) (page 131) and [Chapter 12: Iframes](#) for more information.

Audio tracks

Audio tracks can be added by choosing Audio (or Resource) from the Insert menu or by clicking on the Insert Audio (or Insert Resource) tool in the Toolbar. Again, different browsers support different audio formats, but most modern browsers support mp4/m4a (AAC) audios. Mp3 (an older format) is also widely supported.

Audio/video settings

Audio and video settings are shown in the General (“Box”) section of the Box Inspector.

Source

The Source2 and Source3 popups can be used to choose alternative audio/video sources.

Poster

The **Poster** popup can be used to choose a poster image for videos. Browsers (and Xway) display the first frame of a video if a poster image is not set.

Preload

This option provides a hint as to whether a video (or audio) should be loaded when the page is loaded. Choose **None** if you don't want the video to be loaded automatically, **Auto** if you do want it to be loaded automatically, and **Metadata** if you want information about the video (but not the entire video) to be loaded. If this is undefined, browsers may choose whether to preload or not. This option has no effect if **Autoplay** is selected.

Autoplay

Select this option if you want a video or audio to be played automatically—but be aware that autoplayed videos and audios may annoy users. If you want a video to be played automatically, consider turning the sound off (using the **Muted** option). If you want a video to be played automatically on IOS, it *must* be muted (or without any audio track) and the **Plays Inline** option should also be selected (see [below](#)).

Controls

This option causes audio/video controls to be displayed in browsers, and is selected by default.

Loop

Select this option if you want a video or audio to be looped.

Muted

Select this option if you want sound to be muted.

Plays Inline

This sets a video attribute that allows muted videos (and videos without soundtracks) to be played automatically on IOS devices. IOS does not normally allow videos to be played automatically, but it makes an exception

for muted and silent videos if this attribute is added (and if the device is not in low-power mode). Otherwise a user must enter full-screen mode to play the video. Part of the motivation behind allowing muted videos to be played automatically is that videos are less expensive, in bandwidth and energy use, than animated GIFs.

External resources

External resources are resources that exist online and are referenced (but not output) by Xway. To add an external resource, choose **Resource** from the **Insert** menu, click on **External**, and enter the URL of the resource you wish to insert (or choose a URL from the URL popup). For example, the following URL will add a graphic of the Xway icon:

<https://softpress.com/resources/xway-icon.png>

Be careful about adding resources (such as this) that you don't actually control. If the resource is moved or deleted, your page will be referencing a missing resource. On the other hand, if you know that a resource will not be moved or deleted, you can use it without having to output a separate copy.

Note: External resources are similar to "URL (Image)" items in Freeway, except that Xway displays a preview for the resource, instead of displaying an empty box containing a URL.

Favicons

Favicons are icons that are used to represent a particular website or page. There are two main types of favicon:

1. Browser favicons are displayed in the tabs and history pages of desktop browsers. These are normally 32×32 pixels in size. You can also specify a 16×16 icon for low-resolution displays, although browsers will use a scaled-down version of the 32×32 icon if there isn't a separate 16×16 icon. If you don't define a favicon, browsers may use a generic icon (Safari creates a generic icon from the first letter of the domain name). Browser favicons are normally PNG or SVG images with a transparent background.

2. Apple Touch favicons are used when saving a web-page shortcut to the home screen of an iOS device. These are normally 180×180 pixels in size. Apple Touch favicons are normally PNG or SVG images with a non-transparent background.

*Note: Browsers originally looked for a 16×16-pixel **favicons.ico** file in the same directory as the home page. Unless you want to support older browsers (with a tiny percentage of users) it's better not to provide this file. Some modern browsers may choose it in preference to 32×32 icons.*

Adding favicons

You can use different favicons with different pages, but it's more common to use a single favicon (or set of favicons) for an entire website. To do this in Xway:

1. Open the **Document: Favicons** section of the Document Inspector. This contains a popup that allows you to choose between Browser favicons and Apple Touch favicons. The text in the popup is underlined if favicons of that type have already been added. Below the popup is a list of favicons that are defined for that type.
2. To add a Browser favicon, choose **Browser** in the popup and click on the **+** button beneath the list. Choose a 32×32 pixel PNG with a transparent background. You can also add a second 16×16 pixel PNG for low-resolution screens, if you wish. Xway displays the name of the image, along with its size. You can also choose an SVG image (SVGs are vector graphics, so they don't have a pixel size).
3. To add an Apple Touch favicon, choose **Apple Touch** in the popup and click on the **+** button beneath the list. Choose a 180×180 pixel PNG with a non-transparent background. Xway displays the name of the image, along with its size. You can also choose an SVG image.

If you want to use a different favicon (or set of favicons) on one particular page or group of pages, you can do this using the Favicons section in the Page Inspector. If you select multiple pages with different sets of favicons, the Page Inspector will use italics to indicate favicons that are not used by every page in the selection.

Note: Safari doesn't display favicons for local previews.

Chapter 10: Links

Working with links

Links (also known as hyperlinks) are cross-references that allow users to navigate the Web. You can define internal links that reference other pages or resources in your site. You can also define external links to pages and resources outside your site.

Links can be added, removed, and edited via the Link Inspector (in the Inspector panel) or via the Link dialog. The Link dialog is similar to Freeway's Edit Hyperlink dialog—except that Xway also supports two distinct types of internal link: Page links and Resource links.

Note: Freeway allows access keys to be added to links, but use of access keys is discouraged, and Xway does not support them.

Adding links

You can add a link by selecting a range of text, or a box, or several boxes, and choosing Link from the Format menu. Xway (and HTML) disallows nested links (links within links), and it is not possible (in Xway or HTML) to have links that partially overlap with other elements. You should also avoid applying links to boxes that contain interactive content (e.g. videos with controls).

Note: If you add a link to a container box that already contains links, Xway will remove the nested links (undoing will restore them).

Another way to add links is to choose a link type in the Link Inspector.

Editing links

You can edit an existing link by selecting it (or placing a text cursor anywhere within it) and choosing Link from the Format menu. You can also change link attributes and styles in the Link Inspector.

Removing links

You can remove an existing link by selecting it (or placing a text cursor anywhere within it) and choosing **Link** from the **Format** menu. Then click on **Remove** in the **Link** dialog.

Another way to remove links is to choose **None** in the **Link Type** popup in the **Link Inspector**.

You can also remove all links that are contained within a selection by choosing **Remove Links** from the **Format** menu. If there is a text selection, **Remove Links** will remove all links that are contained within the text selection. If you select a box (or boxes) **Remove Links** will remove all links that are applied to content boxes (such as images) or that are applied to text within container boxes (such as divs), but will not remove any links that are within child boxes.

Note: Remove Links is similar to Flatten, which removes span elements.

Link type

The **Link Type** popup allows you to choose between **Page**, **Resource**, and **External** links. **Page** links are links to other Xway pages, **Resource** links are links to resources that Xway will publish, and **External** links are links to external pages or resources.

Page links

Page links are links to other pages in your Xway document. The **Page** popup allows you to choose from an alphabetical list of pages. You can also link to a section of a page, by using the **Item** popup to choose from an alphabetical list of items that are on the page.

Note: Linking to items is similar to using “anchors” in Freeway, except that you do not need to create anchors in order to target an element.

Resource links

Resource links are links to resources that Xway will publish. You can link to any file in this way, and Xway will publish the file with other resources. This can be a resource that you have previously linked to (the **Resource** popup displays an alphabetical list of recent resource links) or a new resource that

you choose from a file dialog. You can use this option to publish and link to PDFs or any other type of file.

You can use the **Download** checkbox to set a **download** attribute that tells browsers to download a resource instead of opening it. Note that most browsers ignore this attribute when a site is previewed locally.

If the **Download** checkbox is selected, Xway also displays a **File Name** text field. This can be left empty, in which case a downloaded resource keeps its existing file name, or it can be used to set a new file name for the downloaded resource. The file name need not have an extension—browsers will automatically add the correct extension.

The **Location** text field allows you to type phrases such as “page=15” (this will target page 15 in a PDF file).

The **Link Inspector** displays a **Content** section for resource links. This is similar to the **Content** section in the **Box Inspector**.

Note: Resource links are similar to the Link To File/PDF Actions in Freeway.

External links

External links are links to pages and resources that are outside your Xway document. The **URL** text field allows you to type or paste an external link. You can also choose recently used external links from the popup beneath the text field. The **Protocol** popup allows you to choose a URL protocol, such as HTTP or HTTPS. **Protocol-relative** links are links that use the same protocol as their parent page (e.g. HTTP or HTTPS depending on whether the parent page is loaded via HTTP or HTTPS).

Mailto links

Mailto links are a type of external link that can be used to provide a contact email address. When a mailto link is clicked or tapped on, browsers trigger the default email client to open a new email to this address.

To create a mailto link, choose **Mailto** from the **Protocol** popup, and use the **Subject**, **To**, **CC**, **BCC**, and **Body** fields to provide an email address, and (optionally) an email subject, body, cc, and bcc address. Multiple email addresses can be separated by commas.

One problem with mailto links is that they may be harvested by bots and used to send spam. If you check the **Obfuscate** checkbox, this will encode the link using HTML character entities, making it harder for spam bots to detect and harvest the address(es). But you might also want to take other precautions. One way to deal with this is to use a temporary email address (such as `contact3276@example.com`) that can be replaced if it is targeted by spam. This could be an email alias that redirects to an actual address.

Link title

Link titles are displayed as help tags in browsers. You can use the **Title** text field to assign titles.

Link target

The **Target** control allows you to set a target. This can normally be left empty, but if you want the link to open in a new window or tab (by default) you can choose `_blank`. A shortcut for doing this is to select the **Open in New Window or Tab** checkbox.

Styling links

Individual (text) links can be styled using the **Text** section of the **Link Inspector**, although it is often better to use default styles to do this. You can use the **Default Styles** section of the **Document Inspector** to define default link styles for each page in a document, or use the **Default Styles** section of the **Page Inspector** to define default link styles for a specific page. You can also use the **Default Styles** section of the **Box Inspector** to define default link styles for specific boxes.

You can define separate styles for (normal) links, visited links, focus links, hover links, and active links. **Hover** defines the style that is used when a mouse is moved over a link, and **Active** defines the style that is used when a mouse is clicked on a link. If you wanted links to be drawn in green without any underlining, but to be underlined when the mouse is moved over them, you could choose **Link** in the **Element** popup (in the **Default Styles** section of the **Inspector** panel) and set **Text Color** to **Green**, then turn off underlining in **Text Decoration**. To get links to be underlined when the mouse is over them, you would then choose **Hover** in the **Element** popup and turn underlining on for

Text Decoration. If you wanted links to be displayed in the same color regardless of whether they've been visited or not, you could choose **Visited** in the **Element** popup and set **Text Color** for visited links to be **Green**.

If you have applied a link to a box, you can use dynamic styles to add a rollover effect (see *Dynamic styles*, page 94). You might also want to turn off link styling for text that is within the box. It's not possible to do this by changing default link styles for the box that has the link, because the link is wrapped around the box and default box styles apply to elements that are *inside* the box. There are two ways around this: you could set default link styles for the page, or you could set default link styles for a container box (e.g. by creating a wrapper box that contains one or more boxes with links).

Chapter 11: Navigation menus

Xway allows you to create navigation menus that are replaced by hamburger menus on devices with small screens. A hamburger menu is a drop-down menu that appears when the user clicks or taps on a hamburger icon (so-called because it contains three horizontal bars that resemble a hamburger).

In Xway, a menu is a box that contains a number of menu items, which provide navigation links. Note that while boxes are sometimes referred to as items in Xway (e.g. Markup items), there is a clear distinction between *menus* (boxes which contain menu items) and *menu items* (child boxes within a menu).

Note: Menu boxes can only contain menu items. It is not possible to add any other kind of content directly within a menu box.

The *Xway Menu Tutorial* (available from our website) provides a step-by-step tutorial on using navigation menus in Xway.

Adding menus

Choose **Menu** from Xway's **Insert** menu to add a menu. Menu boxes initially contain four menu items, but additional items can be added by duplicating existing items.

Xway sets some default styles for newly created menu boxes: the font defaults to Helvetica (or Sans-Serif if Helvetica is not available), the text color (and default color for links) defaults to black, the default background color defaults to white, and the default text decoration for links is set to none.

Menus are normally added to a master page.

Note: Xway does not support multiple menus on a page. If you need a second level of navigation links, consider using a box with text links that appears below the main menu.

Positioning menus

Menus are normally placed at the top of a page. If you are adding a menu to an existing site, you can add it as the first item by placing a text insertion point at the start of the page div: select the first item in the page div (and press **Tab** if you selected it in the **Site** panel), then press **Up-arrow** until the text insertion point is at the start of the page div). Alternatively, if you have a **Header** box at the top of the page, you can add a menu as the first item within this box: select the **Header** box (and press **Tab** if you selected it in the **Site** panel), then press **Up-arrow** until the text insertion point is at the start of the **Header** box).

It also makes sense for menus to be given absolute or fixed or sticky position (choose **Absolute** or **Fixed** or **Sticky** from the **Position** popup in the **Style** section of the **Box Inspector**) because this makes them independent of other content, and allows a hamburger menu to overlay the other content that is on a page, instead of pushing it down the page when it is opened.

1. Choose **Absolute** position if you want a menu to appear at or near the top of a page, but scroll upwards when the page is scrolled.
2. Choose **Fixed** position if you want a menu to stick to the top of the screen (or browser window) and have the page scroll behind it (similar to a Mac menu bar).
3. Choose **Sticky** position if you want a menu to appear near the top of a page, but stick to the top of the screen (or browser window) when the page is scrolled upwards. Note that if you choose sticky position, the menu should be inserted within the page div rather than within a header box. See *Sticky position* (page 59) for more information on this.

If a menu has absolute or fixed or sticky position, we need to ensure that it is displayed on top of other items. Xway does this by setting its z-index to a relatively large value (999): this is displayed in the **Z-Index** field in the **Style** section of the **Box Inspector**. If a menu has absolute or fixed position, we also need to prevent it from obscuring content that is at the top of a page. The simplest way to do this is to set some top padding on the page div that corresponds roughly to the height of the menu (try 38px as a starting point).

Adding and deleting menu items

You can add further menu items to a menu by duplicating an existing item. It's also possible to copy and paste menu items.

Menu items can be deleted, like other boxes, but Xway does not allow all the menu items within a menu to be deleted: a menu must contain at least one menu item.

Editing menu items

Menu items can be edited in a similar way to other container boxes: double-click (or press **Command-Return**) to edit the text within a menu item. You can also use the **Tab** key to move to the next menu item (or use **Shift-Tab** to move to the previous item).

In contrast to other container boxes, a menu item can only contain inline content. You cannot add paragraphs or line breaks, or other block elements such as container boxes. You can add inline graphics if needed.

Setting links

Menu items are used to provide navigation links.

Links can be set whenever a menu item is selected, whether or not it is currently being edited, and are applied to all the text that is within the menu item, regardless of the current text selection (if any).

Menu Settings

The **Menu** section of the **Box Inspector** can be used to configure the most commonly used menu settings. Some of the controls that appear in this section duplicate controls that are found in other sections. They are repeated here for convenience.

Font

This is the font that is used within menu items. This duplicates the **Font** control in the **Text** section of the **Box Inspector**.

Size

This is the size of text within menu items. This duplicates the **Size** control in the **Text** section of the **Box Inspector**.

Text Color

This is the color of text within the menu. This duplicates the **Text Color** control in the **Text** section of the **Box Inspector**, and the **Text Color** control for links and visited links in the **Default Styles** section of the **Box Inspector**.

Background Color

This is the background color of a menu. This duplicates the **Background Color** control in the **Background** section of the **Box Inspector**.

If a menu has fixed position, you might want to use a partially transparent background color (e.g. with an opacity value of 90%) so that content that is scrolled behind the menu will be partially visible. A partially transparent background color is replaced by its opaque equivalent in hamburger menus.

Hover Text Color

This is the hover color of text in a menu. This duplicates the **Text Color** popup for **Hover Link** in the **Default Styles** section of the **Box Inspector**. The hover color is also used for the hamburger icon, except when there is a hover background color.

The hover color isn't used for the hamburger icon (or the link that follows it in the hamburger menu bar) when a hover background color has been set. This is because the hover background isn't applied to the hamburger icon (or to the following link) and the hover color may be inappropriate without a contrasting background.

Hover Background Color

This sets a background color that is displayed when a user hovers over a menu item. The hover background color is not applied to the hamburger icon or to the first link when this is centered in the menu bar after the hamburger icon.

Background Radius

This sets a border radius for hover backgrounds. The default value (4px) creates backgrounds with rounded corners that are similar to menu highlight backgrounds in recent versions of macOS.

Hover Transition

This offers an easy way to set a transition for hover states. Hover transitions are also displayed in the list of **Extended Properties** for Link elements in the **Default Styles** section of the **Box Inspector**.

To create a half-second transition that affects the hover color (but not the background hover color) enter `color 0.5s` in the **Transition** field. To create a transition that also affects the background color, you can enter `all 0.5s`.

Horizontal Padding

This is the amount of horizontal padding that is used for each menu item (default: 10px). Xway currently requires this to be a pixel measurement.

Vertical Padding

This is the amount of vertical padding that is used for each menu item (default: 10px). Xway currently requires this to be a pixel measurement.

*Note: If you specify a large amount of vertical padding, you may find that menu items are spaced too far apart in hamburger menus. An alternative is to add extra vertical (top/bottom) padding to the parent menu (select the parent menu and set its top and bottom padding in the **Padding** section of the **Box Inspector**).*

Horizontal Margin

This is the horizontal margin for each menu item (default: 0px) in full-width menus (it is replaced by zero in hamburger menus). This is horizontal space around (separating) each item.

Horizontal Inset

You can define a horizontal inset that will be added as a left margin to the first menu item, and as a right margin to the last menu item. This can be used to position menu items within a left- or right-aligned menu.

Alignment

This controls how menu items are aligned within full-width menus. The default option centers items within the menu bar. You can also align items left or right.

Show Hamburger

This determines when the hamburger icon is displayed. **Below Breakpoint** causes a hamburger menu to be displayed whenever the width of a device (or browser window) is less than the defined breakpoint. **Never** means that a hamburger menu is never displayed. **Always** means that a hamburger menu is always displayed (you might choose this option for a more minimalist design).

Breakpoint

This is the minimum width of a device (or browser window) that is required for a full menu bar. At narrower widths, the menu bar is replaced by a hamburger menu.

The default breakpoint value is 768px. Choose a larger value if you have many menu items, or choose a smaller value if you have only a few menu items. Common breakpoint values include: 320px (small phones), 480px (larger phones), 768px (tablets), 1024px (small desktops/laptops), and 1200px (larger desktops/laptops).

You can use Xway's **Web** view to see what works for your menu. Drag the divider between the **Web** view and the **Inspector** panel (or **Site** panel) so that you change the width of the **Web** view. If menu items overflow the edges of the page before the horizontal bar is replaced with a hamburger menu, set a smaller breakpoint. If there is plenty of room, try using a larger breakpoint.

Note: Xway does not allow breakpoints to be smaller than 200px.

Hamburger Size

This determines the size of the hamburger icon. With the default option, **Automatic**, the size is calculated automatically.

Hamburger Alignment

This controls how the hamburger icon is aligned within hamburger menus. The default option causes it to be left-aligned. You can also set it to be right-aligned or centered.

Hamburger Menu Align

This controls the alignment of menu items in a hamburger menu. The default option is for these to be left-aligned.

Animate

This checkbox controls whether the hamburger icon and drop-down menu are animated with a short transition. If **Animate** is selected, Xway also adds a `prefers-reduced-motion` media query to CSS output, so that animations are automatically disabled if a user has chosen **Reduce Motion** as an accessibility option (e.g. via the **Accessibility/Display** section of **System Preferences** on Mac computers).

Keep Home in Menu Bar

This determines whether the Home (first) menu item is kept in the menu bar when a hamburger menu is used, or whether it is moved into the hamburger menu along with other items. There is usually plenty of space in a hamburger menu bar—keeping Home in the menu bar provides an easy way for users to navigate to the home page without having to go through the extra step of opening the hamburger menu.

Use Master Styles

You can use this checkbox to reattach the styles and link styles of a menu to the styles and link styles that are used by a master menu. This duplicates the **Use Master Style** checkbox in the **Style** section of the **Box Inspector**, and the **Use Master Default Style** checkbox for links, visited links, and hover links in the **Default Styles** section of the **Box Inspector**.

Menu JavaScript

Menus do not depend on JavaScript for basic functionality, but Xway outputs a short JavaScript file that tweaks their behavior:

- Hamburger menus are closed after clicking on a navigation link to a target that is on the same page.
- Xway prevents pages from scrolling behind an open hamburger menu with `fixed` position (the menu can scroll, if it needs to).

Chapter 12: Iframes

Iframes are inline frames that can hold external content. This could be a YouTube or Vimeo video, or a Google map, or an HTML page, or some other content.

You can add an iframe to a page by choosing **Iframe** from the **Insert** menu or by clicking on the **Insert Iframe** icon in the **Toolbar**.

Iframes are normally displayed with previews that show how they will appear in a browser. If Xway is unable to create a preview, it will display an empty box with an iframe label or an error message.

Iframe settings

Iframe settings can be entered within the **Insert Iframe** dialog, or in the **General** ("Box") section of the **Box Inspector** (when an iframe is selected).

URL

Enter the URL of the content that you wish to display within the iframe. Press **Return** (or **Tab**) after you have entered the URL. For some kinds of content (such as YouTube and Vimeo videos) Xway will update the settings that it displays in order to include settings that are relevant to that content.

*Note: The **OK** button in the **Insert Iframe** dialog ceases to be a default button (it is drawn in white/gray rather than blue) when the **URL** text field is being edited. This means you can press **Return**, and Xway will update the iframe settings to match the new URL, without simultaneously dismissing the dialog. Pressing **Return** a second time (when the button is blue) will dismiss the dialog.*

Xway accepts the following kinds of iframe URL:

1. **HTTPS URL** (beginning with **https://**). This is what you should use most of the time.
2. **Protocol-relative URL** (beginning with **//**). A protocol-relative URL fetches content via the same protocol that is used to fetch the page that contains the URL (e.g. **https** from an **https** page, or **http** from an **http** page). Note, however,

that protocol-relative URLs may cause unexpected results when you preview in a browser (the browser will treat them as file URLs).

3. Relative URL (linking to content within your own site).

Note: Xway does not accept http (insecure) URLs: if you type "http:", Xway will correct it to "https:". This is because insecure URLs cannot be accessed from secure pages, and while you can load insecure content from insecure pages, this will break if your site is later switched to secure hosting. Generally, you should avoid loading insecure content in iframes, but if your pages are already insecure, and the content you want to load is also insecure, you could use a protocol-relative URL to do this.

Note: Not all pages can be loaded within a frame. Some pages have an X-Frame-Options policy that prevents them from being loaded in this way.

Title

Titles are recommended for accessibility purposes. The title of an iframe should describe its contents.

Allow Full Screen

This determines whether the content of an iframe can be displayed in a full-screen view. If the iframe contains a YouTube video, and Allow Full Screen is turned off, Xway will also set the YouTube fullscreen parameter to zero, so that the YouTube full-screen button is not shown.

Sandbox

Turning on the Sandbox checkbox sets restrictions on iframe content, including blocking forms and scripts. This reduces risks from malicious content. If Sandbox is turned on, you can re-enable capabilities that are required by the content (e.g. turn on the Allow Scripts checkbox to allow scripts).

Iframe name/ID

The Name/ID field in the Box Inspector is used to set the ID and name of an iframe on output. If you wish to use a name that is different from the iframe's ID, you can set it as an extended attribute.

Iframes and margins

Iframes are inline items, like graphics and videos etc. They can be embedded within text, or they can stand on their own, within empty paragraphs. When iframes are placed within empty paragraphs, without any surrounding text, you can adjust (or remove) the vertical spacing between successive iframes by adjusting the vertical margins on the containing paragraphs:

1. Select an iframe.
2. Right-arrow to display the Paragraph Inspector.
3. Adjust the top and bottom margins (e.g. by setting them to zero).

YouTube videos

Iframes can be used to add YouTube videos to a page.

*Note: YouTube videos currently display an error when pages are viewed locally, in browsers or in Xway's **Web** view. They should work online if they can be seen in Xway's **Page** view, but we recommend checking after uploading. If YouTube videos cannot be viewed online, they may be configured to prevent them from being embedded. This is something you can change (in YouTube settings) if you own or manage the content.*

Adding a YouTube video

To add a YouTube video to your page, choose **Iframe** from the Insert menu or click on the **Insert Iframe** icon in the Toolbar. You can copy a YouTube video URL by control-clicking on it in a browser and choosing **Copy Link** (or **Copy Link Address/Location**). If the video is currently playing in a browser, you can control-click (or right-click) and choose **Copy video URL** (or **Copy video URL at current time**), or you can copy the URL from the browser address bar. Paste the URL into the URL field of the **Insert Iframe** dialog.

*Note: Xway converts YouTube URLs into the correct format for displaying within an iframe. If the original URL contains parameters (such as **autoplay=1**) Xway uses these to set the corresponding setting in its UI (by turning on the **Autoplay** checkbox in this case). Parameters that do not have a corresponding Xway setting are retained in the URL, unless they have been deprecated (deprecated parameters such as **autohide** are discarded). If you wish to add a parameter that does not have a*

corresponding Xway setting (e.g. `modestbranding=1` to remove the YouTube logo) you can add it to the URL (using “&” to separate it from other parameters).

YouTube settings

Xway displays the following settings for YouTube videos:

Autoplay

The Autoplay checkbox determines whether a video is played automatically.

Controls

The Controls checkbox can be turned off if you wish to disable on-screen video controls.

Disable Cookies

Select this checkbox if you wish to prevent cookies from being used with embedded YouTube videos (“privacy-enhanced mode”). This sets the YouTube domain to be `www.youtube-nocookie.com`. According to YouTube, “Privacy Enhanced Mode allows you to embed YouTube videos without using cookies that track viewing behavior. This means no activity is collected to personalize the viewing experience. Instead, video recommendations are contextual and related to the current video. Videos playing in Privacy Enhanced Mode won’t influence the viewer’s browsing experience on YouTube.”

Disable Keyboard Controls

This checkbox will disable keyboard controls (e.g. Space to play/pause).

Enable JavaScript API

Turn on this checkbox if you want to control a video through JavaScript APIs.

Loop

Turn on this checkbox if you want a video to be looped.

Muted

Turn on this checkbox if you want a video to be muted.

Show Annotations

Video annotations are disabled if this checkbox is turned off.

Show Related Videos

If this checkbox is turned off, Xway adds `rel=0` to the YouTube URL. The behavior of this parameter changed in 2018. Previously, if `rel` was set to zero, the player would not show related videos after the initial video had been played. Currently, setting `rel` to zero causes related videos to come from the same channel as the video that was played initially.

Start

If you want a video to start playing after its beginning, enter the location (in seconds) where it should start playing.

End

If you want a video to stop playing before it reaches its end, enter the location (in seconds) where it should stop playing.

Vimeo videos

Adding a Vimeo video

To add a Vimeo video to your page, choose **Iframe** from the **Insert** menu or click on the **Insert Iframe** icon in the **Toolbar**. Copy a Vimeo video URL from a browser and paste it into the **iframe URL** field.

*Note: Xway converts Vimeo URLs into the correct format for displaying within an iframe. If the original URL contains parameters (such as `autoplay=1`) Xway maps these to the corresponding setting in its UI (by turning on the **Autoplay** checkbox in this case). Parameters that do not have a corresponding Xway setting are retained in the URL, unless they have been deprecated. If you wish to add a parameter that does not have a corresponding Xway setting you can add it to the URL (using “&” to separate it from other parameters). If the URL contains a start time, other parameters should be added before the start time (after ? and before #).*

Vimeo settings

Autoplay

The **Autoplay** checkbox determines whether a video is played automatically.

Controls

The Controls checkbox can be turned off if you wish to disable on-screen video controls.

Loop

Turn on this checkbox if you want a video to be looped.

Muted

Turn on this checkbox if you want a video to be muted.

Start

If you want a video to start playing after its beginning, enter the location (in seconds) where it should start playing.

Video aspect ratio

Videos commonly have 16:9 aspect ratio, and Xway accordingly chooses 320×180 as a default size for iframes. To save you from having to calculate the correct ratio after resizing (and to allow for the fact that some videos have 4:3 aspect ratio), Xway displays a **Fit to Aspect Ratio** button for YouTube and Vimeo videos in the Dimensions section of the Box Inspector. This will adjust the box height so that it fits its video content.

Something that is more difficult is preserving aspect ratio when using flexible sizes (such as percentages). The following trick can be used to do this:

1. Insert the iframe within a div: in Xway, insert an empty container box (which will default to a div) and insert an iframe within this empty box.
2. Set the div wrapper to have 56.25% bottom padding.
3. Set the width and height of the iframe to be 100%.
4. Set the iframe position to be absolute (choose **Absolute** in the Position popup in the Style section of the Box Inspector).

Note: The reason this works is that, in CSS, padding (horizontal or vertical) is calculated as a percentage of a box's width. In this case the padding that is added at the bottom of a box is 9/16 of the box's width (56.25% is 9÷16 expressed as a percentage).

*Because the iframe within the div is absolute, it does not contribute to the div's content size—so the height of the div is solely determined by its bottom padding. If a video has 4:3 aspect ratio, you can use the same steps, but set the **div** wrapper to have 75% bottom padding (step 2).*

Maps

Iframes can be used to add maps to a page.

Adding a Google map

You can add a Google map by retrieving an embed code from Google Maps, and pasting this into the Insert Iframe dialog in Xway.

1. Navigate to <https://maps.google.com>
2. Use the search field to choose a location
3. Click on Share in the sidebar
4. Click on Embed a map in the Share screen
5. Adjust the position and zoom (etc.)
6. Click on Copy HTML
7. Choose Iframe from Xway's Insert menu or click on the Insert Iframe icon in the Toolbar. Paste the HTML code that you copied (step 6) into the URL field in the Insert Iframe dialog. (Xway will extract the URL from the HTML code and discard everything else.)
8. Add a title for accessibility purposes and OK the dialog
9. Resize the map within Xway. 4:3 (e.g. 400×300 or 600×450) is a good aspect ratio for maps.

Adding an OpenStreet map

You can add an OpenStreet map by retrieving an embed code from OpenStreetMap, and pasting this into the Insert Iframe dialog in Xway.

1. Navigate to <https://openstreetmap.org>
2. Use the search field to choose a location

3. Adjust the position and zoom (etc.)
4. Click on the **Share** button on the right of the map
5. Select **HTML** in the **Share** sidebar
6. Copy the code below the **HTML** button
7. Choose **Iframe** from Xway's **Insert** menu or click on the **Insert Iframe** icon in the **Toolbar**. Paste the HTML code that you copied (step 6) into the **URL** field in the **Insert Iframe** dialog. (Xway will extract the URL from the HTML code and discard everything else.)
8. Add a title for accessibility purposes and OK the dialog
9. Resize the map within Xway. 4:3 (e.g. 400×300 or 600×450) is a good aspect ratio for maps.

Flexible maps

If you want to create a flexible map that adjusts to the size of its container, you can adapt the steps that were given for creating a flexible video iframe (see [Video aspect ratio](#) above):

1. Insert the iframe within a **div**: in Xway, insert an empty container box (which will default to a **div**) and insert an iframe within this empty box.
2. Set the **div** wrapper to have 75% bottom padding (for 4:3 aspect ratio).
3. Set the width and height of the iframe to be 100%.
4. Set the iframe position to be absolute (choose **Absolute** in the **Position** popup in the **Style** section of the **Box Inspector**).

Chapter 13: Markup

Xway allows you to add various forms of additional markup. These include extended HTML attributes, extended style properties, markup items, CSS markup, JavaScript markup, and generic page markup.

Extended HTML attributes

Extended HTML attributes are HTML attributes that are not otherwise supported by Xway. There are Extended HTML Attributes sections in the Document Inspector, Page Inspector, Box Inspector, Paragraph Inspector, Link Inspector, and Span Inspector.

Extended HTML attributes are output along with normal attributes. Note that if an extended attribute that Xway does support is added, it will replace that attribute—so you would normally want to avoid doing that.

Note: Class attributes are an exception—extended class values are appended to classes that Xway uses for styling paragraphs and some other elements. This allows you to add classes for use in JavaScript etc. without losing styling.

*Note: If you want to edit the name of an extended attribute or property after it has been entered, you can do so by clicking on it. Pressing **Return** or clicking on the value will edit the value.*

Extended attributes are added to the HTML tag for that particular element (<div>, <section>, , <p>, , <a> and so on). Extended page attributes are added to the page's <body>, <head>, or <html> tags (see below).

Extended page attributes

Extended page attributes can be added directly to an individual page or to every page in a document. To add extended page attributes, enter them in the Extended HTML Attributes section of the Page or Document Inspector. Extended attributes that are added in the Document Inspector will be output on every page that does not have its own page attributes.

Extended page attributes can be added to the page's `<body>`, `<head>`, or `<html>` elements: use the Element popup at the top of the Extended HTML Attributes section of the Page or Document Inspector to choose between these.

Page elements that have extended attributes are underlined in the Element popup: by clicking on this popup, you can see at a glance whether extended attributes have been added (e.g. `Head` will be underlined if extended attributes have been added to the `head` element).

Extended properties

Extended properties are style properties that are not otherwise supported by Xway. There are Extended Properties sections in the Document Inspector, Page Inspector, Box Inspector, Paragraph Inspector, Link Inspector, and Span Inspector. Extended properties are output along with normal style properties. Note that if an extended property that Xway does support is added, it will replace that property—so you would normally want to avoid doing that.

For an example of using an extended style property, select a box that has a background or border, open the Extended Properties section in the Box Inspector, click on the + button, and enter `border-radius` in the Name field and `24px` in the Value field. If you preview in a browser, you should see that the box is displayed with 24px rounded corners.

*Note: In recent versions of Xway, you can use the **Corners** section of the **Box Inspector** to define corners.*

Extended properties can also be added to default and dynamic styles.

Floated boxes

Xway does not currently have direct support for floating graphics (or other boxes) next to text, but you can use an extended property to do this for graphics and other content boxes. We don't recommend doing this with container boxes.

To float a content box (graphic, video etc.) next to text:

1. Select a content box that is accompanied by text.
2. Open the Extended Properties section in the Box Inspector.

3. Click on the + button and enter float in the Name section of the popover.
4. Enter left or right in the Value section of the popover.

If you preview in a browser, you should see that the box is floated left or right of the accompanying text.

Markup items

Markup items are boxes that contain HTML markup. Markup boxes can be inline or non-inline. If the markup that you are inserting does not contain any block elements (paragraphs, divs etc.), it can be inserted alongside other inline content (text, images etc.) If it does contain block elements, it should be inserted as non-inline content, or the HTML will be invalid: HTML does not allow block elements to be inserted within inline elements (block elements may contain inline elements, but inline elements cannot contain block elements).

Note: One way to understand the distinction between inline elements and block elements is to compare it with normal English usage. Sentences and phrases (inline elements) can be inserted within paragraphs and sections (block elements), but it is not possible to insert a paragraph or section within a phrase or sentence.

To insert a markup box, choose **Markup** from the **Insert** menu. If you want the markup to be inserted as inline markup (and you know that it does not contain any block elements) select the **Inline** checkbox.

There are two ways of adding markup content to a markup box:

1. You can enter it directly into the Markup text view.
2. You can choose a text file from the File popup. In this case, the contents of the text file will be displayed in the text view, but the text view will be disabled (you can select and copy text from it, but you cannot edit it). Xway treats markup files as resources, and lists them in the **Resources** view. As with other resources, if the original file is edited, Xway will automatically use its updated content. If you wish to replace a markup file with direct content, choose **None** from the File popup and enter the content in the Markup text view.

When a markup box is selected, you can use the **Box Inspector** to edit the markup, or select a different markup file, or change its inline status. If you change inline markup to be non-inline, Xway will reposition the markup so that it is not inline.

The **Box Inspector** displays a **Content** section for markup boxes that have markup files. If you select the path by triple-clicking on it (or dragging over it) in the **Path** field, you can control-click (or right-click) to display a contextual menu, and choose **Show in Finder** from the **Services** submenu. This also contains other commands that allow you to open the file in a text editor such as **TextEdit** or **BEdit**.

*Note: When editing a markup text view, you can use **Command-Return** or **Function-Return** (**Enter**) to end editing, and you can use **Function-Tab** (and **Function-Shift-Tab**) to end editing and tab to the next (or previous) field.*

The **Width** and **Height** fields of the **Box** section of the **Box Inspector** can be used to set a display size for markup items within Xway's **Page** view. This does not affect the size of the markup item on output. If a display width and/or height is defined, you can also resize markup items with the mouse.

Page markup

You can also add markup to a page without embedding it within a box. This allows you to add CSS markup, or JavaScript markup, or any other kind of markup within the head element of a page, and at other locations on a page.

Note: Xway strips trailing spaces and trailing empty lines from page markup.

CSS markup

CSS markup can be used to add CSS that is not otherwise supported by Xway.

CSS markup can be added directly to a page (or master page), or to every page in a document. To add CSS markup, enter it in the **CSS Markup** section of the **Page** or **Document Inspector**. Markup that is added in the **Document Inspector** will be output on every page that does not have its own CSS markup, and is not derived from a master page that has its own CSS markup. The **Page Inspector** contains a **Use Master CSS Markup** checkbox that can be used to disconnect or reattach CSS markup to a master page's CSS markup. If a page

does not have its own master page, this checkbox is labelled **Use Document CSS Markup**, and can be used to disconnect or reattach CSS markup to the document's default CSS markup.

JavaScript markup

JavaScript markup can be added directly to a page (or master page), or to every page in a document. To add JavaScript markup, enter it in the **JavaScript Markup** section of the **Page** or **Document Inspector**. Markup that is added in the **Document Inspector** will be output on every page that does not have its own JavaScript markup, and is not derived from a master page that has its own JavaScript markup. The **Page Inspector** contains a **Use Master JavaScript Markup** checkbox that can be used to disconnect or reattach JavaScript markup to a master page's JavaScript markup. If a page does not have its own master page, this checkbox is labelled **Use Document JavaScript Markup**, and can be used to disconnect or reattach JavaScript markup to the document's default JavaScript markup.

As an example, if you enter the following text as JavaScript markup:

```
alert("Hello world")
```

it will be output as:

```
<script>  
alert("Hello world")  
</script>
```

and will cause a "Hello world" alert to be displayed when the page is opened.

Xway allows you to add JavaScript to the head or body section of a page. Choose **Body** from the popup menu at the top of the **JavaScript Markup** section if you want a script to run after the rest of the page has loaded.

Generic markup

You can use generic markup to add any kind of markup to a page (or master page), or to every page in a document. Generic markup is markup that doesn't fit in any of the previous categories, or which needs to be added in a specific place.

To add generic markup, open the **Generic Markup** section of the **Page** or **Document Inspector**, and choose a location where you want the markup to be

added: before `</head>` is the default and most common location. Markup that is added in the Document Inspector will be output on every page that does not have its own generic markup, and is not derived from a master page that has its own generic markup. The Page Inspector contains a Use Master Generic Markup checkbox that can be used to disconnect or reattach generic markup to a master page's generic markup. If a page does not have its own master page, this checkbox is labelled Use Document Generic Markup, and can be used to disconnect or reattach generic markup to the document's default generic markup.

Locations that contain markup are underlined in the Location popup: by clicking on this popup, you can see at a glance whether a page contains markup.

Note: Generic markup is equivalent to HTML Markup in Freeway's Page menu.

CSS animations

CSS animations can be added using extended properties and CSS markup.

Key frames

Key frames define the control points of an animation. These typically include a starting point (from) and an end point (to), and may also include midpoints. A `@keyframes` rule is used to define these points. The following rules cause an element to fade into view, or to move upwards into position:

```
@keyframes fadeIn
{
  from
  {
    opacity: 0;
  }
  to
  {
    opacity: 1;
  }
}
```

```
@keyframes moveUp
{
  from
  {
    transform: translateY(20px);
  }
  to
  {
    transform: translateY(0);
  }
}
```

@keyframes rules can be added in the CSS Markup section of the Page Inspector.

Animation properties

The following properties can be used to control animations. For animating boxes, these can be added in the Extended Properties section of the Box Inspector.

animation-name

This specifies the name of a @keyframes rule which describes the control points of an animation. If you want an element to fade into view, using the fadeIn rule (above), you would specify fadeIn as the animation-name value.

animation-duration

This is the duration of an animation, in seconds or milliseconds. 1.5s specifies that an animation should run for 1.5 seconds, while 450ms specifies a duration of 450 milliseconds.

animation-delay

This can be used to specify a delay before the start of an animation, in seconds or milliseconds. It's also possible to specify a negative delay, in which case the animation will start partway through.

animation-direction

This specifies the direction of an animation. Possible values include: normal, reverse, alternate, and alternate-reverse. The default value is normal.

animation-fill-mode

This specifies how the style of an element is affected by an animation that is not currently playing. Possible values include **none** (the animation does not apply any styles before or after it has played), **forwards** (the element retains styles set by the last keyframe), **backwards** (style values set by the first keyframe are applied before the animation starts), and **both** (a combination of forwards and backwards). The default value is **none**.

animation-iteration-count

This specifies the number of times an animation should play. The default value is 1.

animation-timing-function

This determines how an animation progresses. Possible values include **linear** (constant speed), **ease-in** (starts slowly and speeds up), **ease-out** (starts quickly and slows down), **ease-in-out** (combination of **ease-in** and **ease-out**), and **ease** (increases in speed before slowing down).

Shorthand

Animation properties can be combined in a form of shorthand. The following shorthand property combines **animation-duration**, **animation-name**, **animation-timing-function**, and **animation-fill-mode**.

`animation: 1s fadeIn ease forwards.`

Setting an animate class

If you wish to animate a number of boxes, you may find it convenient to set a class on the boxes that you wish to animate, and define properties that apply to any box that has this class applied:

1. To set a class, enter the following attribute in the Extended HTML Attributes section of the Box Inspector: `class [Name], animate [Value]`.
2. To define properties that apply to this class, add something like the following in the CSS Markup section of the Page Inspector (this uses the shorthand notation mentioned earlier):

```
.animate
{
  animation: 1s moveUp ease forwards;
}
```

The DSGN template uses an `animate` class in this way. See [DSGN](#) (page 209).

Reduced motion

If a user has chosen **Reduce Motion** as an accessibility option (e.g. via the **Accessibility/Display** section of **System Preferences** on Mac computers), you can respect this by adding a `prefers-reduced-motion` media query in CSS Markup. This can be done by choosing a different keyframe rule. For example, if you previously chose `moveUp` as a keyframe rule, you might replace this with `fadeIn`:

```
@media (prefers-reduced-motion: reduce)
{
  .animate { animation-name: fadeIn; }
}
```

Further information

For more information on CSS animations see [Using CSS Animations](#).

Chapter 14: Components

About components

Xway components are file packages that contain HTML, Resource, CSS, and JavaScript content. They can be used to add Exhibeo galleries or other content to a page. Components have a `.xwComponent` extension.

Exhibeo components

Exhibeo galleries can be exported as Xway components from Exhibeo 2.0.4 or greater: choose **Export to Xway** from Exhibeo's **Export** menu to do this.

Using components

To import a component into Xway, choose **Component** from the **Insert** menu, or click on the **Insert Component** icon in the **Toolbar**.

To replace a component, click on the **Replace** button in the **Component** section of the **Box Inspector**. If a component has been modified since it was imported, Xway also displays an **Update** button in the **Box Inspector**: you can update it by clicking on this button.

The **Component** section of the **Box Inspector** displays information about a component, including its name (filename without extension) and type (e.g. "Exhibeo Showtime gallery"). If you click on the type information, Xway displays a popover with further information (e.g. "Created with Exhibeo 2, copyright © Softpress Systems, 2012-2023"). If multiple components of different types are selected, the popover presents information for these components in a list.

The **Width** and **Height** fields of the **Component** section of the **Box Inspector** can be used to set a display size for component boxes within Xway's **Page** view. This does not affect the size of the component on output, and these values are ignored when CSS dimensions are specified (or can be calculated). If a display width and/or height is defined, you can also resize component boxes with the

mouse. (New component boxes are given a default display height of 200px when they are inserted.)

Component resources

In order to avoid unnecessary duplication, component resources (including CSS and JavaScript files) are matched with existing resources and imported as detached resources (similar to pasted graphics). If two components contain duplicate resources, only a single resource is imported.

Note: The Resources view can be used to replace component resources with different resources, and component resources can be renamed. But updating a component will revert these changes.

*Note: CSS files are published in a **css** folder, and JavaScript files are published in a **scripts** folder within Xway's **Site** folder.*

Note: Xway processes component CSS files so that the ID that is assigned to the component in Xway is used in the component's styles. If a component is used on multiple pages, and assigned a different ID on each page, Xway will output a different CSS file for each component. If the same ID is used on each page, Xway will output a single CSS file.

Component format

If you wish to create your own components by hand, or are interested in writing an application to do this, this section describes their format. You don't need to know any of this in order to use components.

Components are packages that have a **.xwcomponent** extension and contain the following items:

1. **markup.html** (required): an HTML file with **head** and **body** sections. The **head** section is optional. If the **body** section contains a **div** wrapper with an **id** that matches **outputID** (below), this will be replaced by the **box** element (in Xway) that contains the component – this might be a **div** or another container type (e.g. **section**).
2. **description** (recommended): a plain text file containing a short description (e.g. "Exhibeo Showtime gallery").

3. **info** (recommended): a plain text file containing additional information (e.g. “Created with Exhibeo 2, copyright © Softpress Systems, 2012–2020”).
4. **version** (required): a plain text file containing a version number. This should be “0.1” for compatibility with current versions of Xway.
5. **outputID** (optional): a plain text file containing a placeholder ID (exibid for Exhibeo galleries). When a component is published, Xway replaces this with the actual ID that is used within Xway (e.g. item1 or gallery).
6. **Resources** (optional): a folder containing resources (such as graphics, videos, audio files, CSS files, and JavaScript files) that are used by the component.

Resources can be accessed from HTML and CSS/JavaScript files (markup.html etc.) using relative links within double quotes: e.g. href="Resources/image.png" or background-image: url("Resources/clear.gif"). Don't use single quotes, or omit quotes, for resource references within CSS files—even if this is otherwise valid. Note that all (local) resource links should be prefixed with **Resources**, regardless of whether the file that they are accessed from is outside the component's **Resources** directory (markup.html) or inside it (CSS and JavaScript files): Xway processes these links and outputs the correct path when the component is published.

Note: Xway expects updated components to have an updated modification date. If you use a text editor to modify one of the files inside a component package, you may also need to update the package date by using a touch command or by temporarily moving the file outside the package before moving it back again.

Chapter 15: Metadata

Web page metadata provides content that is useful to search engines, browsers, and social media. Much of this data is supplied by meta tags, but some is supplied by other elements (e.g. page title, canonical URL). In Xway, the easiest way to manage metadata is via the Document Metadata and Page Metadata dialogs. If you wish to add meta tags that are not supported by these dialogs, you can do so using the Meta Tags sections of the Document Inspector and Page Inspector. Note, however, that some meta tags that were used in the past are now obsolete, and are not supported in the Metadata dialogs for this reason. The Metadata dialogs provide a high-level interface that has the following advantages over adding meta tags manually:

1. You don't need to remember the names of meta tags, or when to use "name" or "property" meta tags.
2. All essential meta tags (and related metadata) are included, along with less essential but commonly used meta tags.
3. Xway automatically manages URL meta tags.
4. It's easy to add and replace image meta tags.
5. Xway automatically generates appropriate image-width and image-height meta tags.
6. Changes to document and master-page metadata are automatically propagated across instance pages.
7. It's possible to selectively reapply master metadata on instance pages.

Note: If you're curious about the metadata that Xway adds to a page, you can view it by switching to Xway's HTML view. If you do this before displaying a Metadata dialog, Xway will update the HTML view when the dialog is dismissed.

Document metadata

Choose Document Metadata from the Page menu to display the Document Metadata dialog. This is where you should start adding metadata to your site, since it provides default metadata that will be used by instance pages that do not have their own separate metadata. Most pages should contain some metadata of their own, but you might not want to add separate images and

descriptions for every page in your site (e.g. pages that you don't expect to be shared on social media). You can use the Document Metadata dialog to set default values that are appropriate for the home page and for any pages that do not have their own descriptions etc.

The Document Metadata dialog is largely identical to the Page Metadata dialog (see below), but contains one additional field in the **General** section.

General

Web URL

This is the base URL of your website, e.g. <https://example.com>. If you have a secure (https) website, enter the domain name and Xway will add <https://> in front of it. If you have an insecure (http) website, you will need to add <http://> instead of <https://>. (We recommend that you have a secure website, since users may avoid visiting insecure websites.)

The base URL can also be set in the top section of the Document Inspector.

*Note: If you open a document that was created in an older version of Xway (before 1.2), Xway can infer the base URL from any **og:url** meta tags that you have previously set up manually. Xway also converts manual **og:url** meta tags (in old documents) into automatically managed tags. This fixes any inconsistencies that might have arisen: e.g. if you moved a page into a folder without updating its **og:url** tags.*

Page metadata

Choose Metadata from the Page menu to display the Page Metadata dialog. We recommend that you do this after setting document metadata in the Document Metadata dialog, and that you set page metadata on master pages (if there are any changes from document metadata that you want to make) before doing this for instance pages.

The Metadata dialog contains a scrolling set of collapsible sections that are similar to the collapsible sections of the Inspector panel). Sections that contain important metadata (General, Open Graph, X) are open by default, while sections that contain less important metadata (Info) are closed by default.

Note that it's possible to edit metadata for multiple pages.

General

The **General** section contains data that is used by search engines.

Page Title

This duplicates the **Title** field in the **Page Inspector**. It is not shown for master pages, since site pages normally have unique titles, and master page titles are not inherited by site pages. Page titles should not be longer than around 70 characters.

Page Description

This is a description of the page contents. This meta tag is (or may be) used by search engines to determine whether your page is relevant to a search query, although the most important factor that determines this is the actual content of the page. Descriptions should not be longer than around 160 characters.

Page URL

This is the “canonical” URL for a page, and is output via a canonical link element. A canonical URL is the URL that you want search engines to use when there are multiple URLs that display the same content (e.g. <https://example.com>, <https://www.example.com>, and <https://example.com/index.html?parameter=1>). If a canonical link is not provided, search engines may list alternative results separately, and this can have a negative effect on page rankings.

If you choose **Automatic** from the **Page URL** popup, and provide a base URL (see [Web URL](#) above), Xway will automatically calculate and output canonical URLs whenever a page is published. This ensures that the canonical URL is always correct, and does not need to be updated manually if you move a page into a new folder or change its file name.

You should set this in the **Document Metadata** dialog (choose **Automatic**), so that it is automatically calculated for all pages in the document.

Open Graph (Social Media)

The **Open Graph** section contains data that is used by social media. You should generally provide the following data.

Title

This is often identical to **Page Title** in the **General** section of the **Metadata** dialog, but can be different. Select the **Use Page Title** checkbox if you want to use the same text as the page title.

Description

This is often identical to **Page Description** in the **General** section, but can be different. Select the **Use Page Description** checkbox if you want to use the same text as the page description.

Site Name

This is the name of your website, and is helpful for brand purposes. As an example, the site name for Apple's website is "Apple".

You should generally set this in the **Document Metadata** dialog, since it is expected that the site name is the same for all pages in a site.

Type

This is normally **Website**, but you can use other values for specific pages. You might choose **Article** for a blog article, or **Book** for a page that is about a book.

For most sites, choose **Website** in the **Document Metadata** dialog. You can choose a different value in the **Page Metadata** dialog for any site pages where this is appropriate.

Image

This is an image that you wish to be displayed by social media when someone links to your web page. An Open Graph image should generally be around 1200 × 630 pixels. Xway automatically calculates and outputs meta tags that specify the width and height of the image (this enables faster layout of link previews).

If you wish to update an Open Graph image resource, it is a good idea to rename the updated resource so its URL changes. Some social media sites don't update images unless the URL is changed.

*Note: If you previously imported an Open Graph image as a permanent resource and entered its URL manually as an **og:image** meta tag (in Xway 1.1), Xway will locate this resource and convert the meta tag into an automatically managed tag. You should*

*then be able to see the image in Xway's **Metadata** dialog, and you can use Xway's **Resources** view to change the resource into a temporary resource (so it can be deleted when it is no longer needed).*

URL

Choose **Automatic** from the URL popup if you wish Xway to output an Open Graph URL meta tag. This is identical to the canonical URL which Xway outputs if you have chosen **Automatic** in the Page URL popup in the **General** section of the **Metadata** dialog.

You should generally set this in the **Document Metadata** dialog.

X (Twitter)

This section contains data that is used by X (Twitter). Some of this is optional, since it duplicates Open Graph data, which X also uses. We recommend that you specify a card type. You don't need to choose an image unless you wish X to use an image that is different from the Open Graph image or you choose a card type that isn't **Summary Large Image**. X's own website contains very little X-specific metadata, apart from the card type.

Title

If you have specified an Open Graph title, you don't need to output a separate X title. Many websites do output it, however. If you wish to output it, you can select the **Use Open Graph Title** checkbox and Xway will use the text in the Open Graph title.

Description

If you have specified an Open Graph description, you don't need to output a separate X description. Many websites do output it, however. If you wish to output it, you can select the **Use Open Graph Description** checkbox and Xway will use the text in the Open Graph description.

Card

This specifies the type of preview that X generates for embedded links. Choose **Summary Large Image** in most cases. This is the only X-specific meta tag that you should definitely specify. Even if you choose to avoid X, other

people may use it to share links to your website (it's also possible that X alternatives might use this information).

Image

You generally don't need to choose an X image if you have already chosen an Open Graph image. One exception to this rule is if you have chosen a card type that isn't Summary Large Image.

Site

You can use this to specify an X handle that is associated with your website (if there is one). Apple's website specifies `@Apple`.

Creator

You can use this to specify the X handle of the page creator. The BBC website specifies `@BBCNews` for both Site and Creator.

Info

This section contains informational (non-essential) data.

Author

This can be used to specify the author of a webpage, if that is relevant.

Copyright

This can be used to provide copyright information, although it is generally better to include this in the actual page layout (typically within a footer)—or do both.

Generator

This identifies the software that was used to create a web page. Xway automatically outputs "Xway" as the generator tag. You can remove this if you wish (we'd rather you didn't) but you can't change it to a different value.

Reapply Master

The Reapply Master button allows you to reapply specific values from a master page, regardless of whether the Use Master Meta Tags checkbox (in the Meta Tags section of the Page Inspector) is on or off.

*Note: Site pages generally have the **Use Master Meta Tags** checkbox turned off, because many meta tags are specific to individual web pages.*

Obsolete meta tags

There are a number of meta tags that were previously used but are now obsolete, and are not supported by the **Metadata** dialog. These include the **keywords** tag, a number of Facebook tags (**fb:pages**, **fb:admins**, **fb:app_id**), and some X tags (**twitter:url**, **twitter:image:height**, and **twitter:image:width**).

Meta tags

The **Meta Tags** sections of the **Page Inspector** and **Document Inspector** list meta tags that are associated with a page or document. Generally, it is better to enter metadata in the **Document Metadata** and **Page Metadata** dialogs (see above), since this allows Xway to manage some of the metadata automatically, and is also easier (and less error-prone) than adding meta tags manually. Any meta tag data that is entered via the **Metadata** dialogs will also appear in the **Meta Tags** sections.

The **Meta Tags** section of the **Page Inspector** contains a **Use Master Meta Tags** checkbox that can be used to disconnect meta tags from a master page's meta tags, or to reattach them if they have been disconnected. If a page does not have its own master page, this checkbox is labelled **Use Document Meta Tags**, and can be used to disconnect meta tags from the document's default meta tags, or to reattach them if they have been disconnected.

In general, the **Use Master Meta Tags** checkbox is less useful than other **Use Master** checkboxes, because site pages typically contain page-specific metadata (so **Use Master Meta Tags** will be turned off). The **Metadata** dialogs also provide additional functionality for synchronising master-page metadata across instance pages, regardless of whether **Use Master Meta Tags** is on or off.

1. If you change metadata for a master page (or for a document) using a **Metadata** dialog, Xway automatically updates the equivalent metadata on instance pages if it previously matched the master-page data.
2. It is also possible to reapply specific master values on instance pages using the **Reapply Master** button.

There are three main kinds of meta tags: name meta tags, property meta tags, and http-equiv meta tags. You can choose between these by selecting **Name**, **Property**, or **HTTP-Equiv** in the **Type** popup near the top of the **Meta Tags** section. If meta tags of a particular type have been defined, the type will be underlined in the **Type** popup.

Name meta tags

Name meta tags are used to add general metadata, such as a description of the page. Important name meta tags can be set in the **Document Metadata** and **Page Metadata** dialogs (see above).

Property meta tags

Property meta tags are similar to name meta tags, and are used by the Open Graph specification to provide information for social media. Important Open Graph meta tags can be set in the **Document Metadata** and **Page Metadata** dialogs (see above).

HTTP-Equiv meta tags

HTTP-Equiv meta tags have a more specialised purpose, and are used as alternatives to HTTP headers. You can ignore these for the most part, unless you have a specific need to use them. There isn't (currently) an HTTP-Equiv section in the **Document Metadata** and **Page Metadata** dialogs.

Adding and removing meta tags

If you wish to add or remove a meta tag that is not supported by the **Document Metadata** and **Page Metadata** dialogs, you can do so by clicking on the plus and minus buttons beneath the list of meta tags.

Editing meta tags

If you wish to edit the value of a meta tag, you can do so by selecting it and clicking on it or pressing **Return**. You should generally avoid doing this for meta tags that are supported by the **Metadata** dialogs, because this may prevent those tags from being managed automatically. Xway does not allow you to edit the values of **generator** and **og:url** meta tags.

If you want to edit the name (or property name) of a meta tag after it has been entered, you can do so by selecting it and clicking on it.

Chapter 16: Flexbox

Introduction

Flexbox (CSS Flexible Box Layout) is a CSS layout model that can be used to position boxes flexibly on a page. A parent container box, known as a *flex container*, contains child items which are known as *flex items*. Flex items are laid out within their container on a horizontal or vertical axis—in rows or columns. There are alignment options that control the way that flex items are positioned within each row or column: they can be aligned with the start, or end, or center of a row or column, or they can be spaced out within the row or column (similarly to the way that justified text is spaced). Flex items can also be configured to shrink or grow so that they fit within the available space. In addition, there are alignment options that operate on a secondary axis: for horizontal layouts, these options position and size items vertically (within a row), while for vertical layouts they position and size items horizontally (within a column). Flex items can fit within a single row or column, or be wrapped onto successive rows or columns.

Using a wrapped horizontal layout is a good way to create layouts that adjust flexibly to the size of a device: on narrow screens flex items can wrap so that there are just one or two items on each row, while wider screens allow space for more items to be displayed on each row.

The *Xway Flexbox Tutorial* (available from our website) provides a step-by-step tutorial on using Flexbox in Xway.

For a general introduction to Flexbox, with helpful illustrations, see [A Complete Guide to Flexbox](#).

Creating a flex container

In Xway, standard container boxes can be converted into flex containers. To do this, select a box (or boxes) and turn on the **Flex Container** checkbox in the **Style** section of the **Box Inspector**. Xway does not allow flex containers to contain text (or links) at the top level of the container box. If you convert a box

that contains text (or links) as well as other boxes, Xway will copy the text into a child box (or boxes) within the flex container.

When a box is converted into a flex container, Xway displays a **Flex Container** section immediately below the **Style** section. Any boxes that are (immediate) children of this container automatically become flex items, so Xway displays a **Flex Item** section when they are selected. It's also possible for a flex item to be a flex container for other flex items.

*Note: If the **Flex Container** checkbox is turned on, Xway hides the **Flow Root** checkbox, since these are mutually exclusive (they reference the same CSS property) and flow-root isn't needed for flex containers.*

The simplest way to start with flex layouts is to use the default **Flex Container** settings but turn on wrapping. This will create a horizontal layout in which boxes are arranged in rows in a normal (forwards) direction. After that, and staying with a horizontal layout, you can consider how you want items to be aligned horizontally (**Justify Content**) and how you want them to be aligned vertically (**Align Items** and/or **Align Content**). Then you can use **Flex Item** settings to control how items grow and shrink within each row.

Inserting flex items

Flex items are inserted within a flex container in the same way that boxes are inserted within text containers: if you select an existing flex item before inserting a new item (container box, image, video etc.), the new item will be inserted after the selected item. If the flex container is empty, or if you wish to insert a flex item before the first item in the container, you can switch into editing mode by pressing **Command-Return** or by clicking on a flex container that is already selected. Editing mode is indicated, as with text containers, by a contrasting outline (e.g. black on light backgrounds). Also as with text containers, the mouse cursor changes to an i-beam when it is over a box that is in editing mode. In contrast to text containers, flex containers do not display a flashing text insertion point.

Note: Markup items cannot be used as flex items because they are not boxes and do not have style properties. But if you want to add a markup item, you can insert it within a box that is a flex item.

Flex container settings

The Flex Container section of the Box Inspector contains settings that determine how items are laid out within the container. Flex items can be arranged horizontally (in rows) or vertically (in columns), and it's also possible for them to be arranged in normal (forwards) order or in reverse order. You can choose whether items should wrap in successive rows or columns, and how they should be aligned within a row or column. There is also a secondary axis that you can control. If items that have different heights are arranged in rows, how should they be aligned vertically? Or if items that have different widths are arranged in columns, how should they be aligned horizontally? Do you want to specify minimum (horizontal and vertical) gaps between items?

*Note: As is the case elsewhere in Xway, properties can be removed (undefined) by deleting the current value in a text field, or by choosing **Undefined** from a popup menu. If a value is undefined, the default value is used instead.*

Direction

This is the direction in which items are distributed. **Row** (the default value) and **Row Reverse** distribute items horizontally (forwards or backwards), while **Column** and **Column Reverse** distribute items vertically (forwards or backwards).

Wrap

This controls whether items are wrapped in multiple rows or columns. Wrapping items is a useful way to create layouts that will adapt to different screen sizes.

Wrap values are: **Don't Wrap** (the default value), **Wrap**, and **Wrap Reverse** (wrap backwards).

Justify Content

This controls how items are aligned within a row (horizontal distribution) or column (vertical distribution).

Justify values are: **Start** (the default value), **End**, **Center**, **Space Between**, and **Space Around**.

These are similar to text-alignment settings: with horizontal (and forwards) distribution, in a left-to-right context, **Start** is equivalent to left align, **End** is equivalent to right align, **Center** is equivalent to center align, and **Space Between** is similar to justify. **Space Between** adds space between items (no space is added before the first item in a line or after the last item in a line), while **Space Around** adds space around each item.

Align Items

This property controls how items are aligned on their secondary axis. If items are distributed in a horizontal direction, **Align Items** controls the way that they are aligned vertically within each row: should they be aligned with the top of the row (**Start**), bottom (**End**), or should they be centered, or stretched to align with the top and bottom of the row?

Possible values are: **Start**, **End**, **Center**, **Baseline**, and **Stretch** (the default value).

*Note: Xway doesn't currently support **Baseline** in its layout view, but will output it if it is selected.*

Align Content

If there are multiple rows (or columns), **Align Content** controls how the entire block of rows (or columns) is aligned on the secondary axis. Note that this is irrelevant if there is no additional space on that axis (e.g., in the case of a horizontal layout, if the flex container has flexible height). It's also irrelevant if wrapping is turned off (Xway hides the setting in that case).

Possible values are: **Start**, **End**, **Center**, **Space Between**, **Space Around**, and **Stretch** (the default value).

Column Gap

This can be used to set a minimum horizontal gap between items. If wrap is turned off for vertical (column-based) layouts, **Column Gap** is irrelevant and Xway hides it.

Row Gap

This can be used to set a minimum vertical gap between items. If wrap is turned off for horizontal (row-based) layouts, Row Gap is irrelevant and Xway hides it.

Flex item settings

The Flex Item section of the Box Inspector contains settings that determine how individual flex items are laid out within the flex container. These can be used to control whether an item can grow or shrink to fit within the available space, and by how much. You can also override the way that an individual item is aligned within the secondary axis (how it is vertically aligned within a row or horizontally aligned within a column).

*Note: As is the case elsewhere in Xway, properties can be removed (undefined) by deleting the current value in a text field, or by choosing **Undefined** from a popup menu. If a value is undefined, the default value is used instead.*

Flex

The Flex popup contains common grow/shrink/basis settings (see below for more information on these individual settings) along with any custom settings that have been defined for boxes that are currently selected. The values shown in the popup correspond directly to CSS “flex-shorthand” values (except that words are capitalized following Mac UI conventions).

*Note: In CSS flex-shorthand syntax, there can be up to three values: the first value is either a special value (**initial**, **auto**, or **none**) or a number that represents the **grow** value, the second value (if present) represents **shrink**, and the third value (if present) represents **basis**. For example, **flex: 0 1 auto** means that the **grow** value is zero, **shrink** is 1, and **basis** is **auto**. If you choose custom values (using the **Grow**, **Shrink**, and **Basis** controls), Xway uses flex shorthand to display these values at the bottom of the Flex popup.*

The Flex popup contains the following settings, along with any custom settings that are currently applied to selected items:

Initial

This is the default value and is equivalent to `flex: 0 1 auto`. The item is sized according to its width/height properties (basis is `auto`), doesn't grow beyond its specified size (grow is 0), but can shrink when there is insufficient space (shrink is 1).

Auto

This is equivalent to `flex: 1 1 auto`. The item is sized according to its width/height properties (basis is `auto`), but is fully flexible (grow and shrink are both 1).

None

This is equivalent to `flex: 0 0 auto`. The item is sized according to its width/height properties (basis is `auto`), and is inflexible (grow and shrink are both 0).

1, 2, 3, 4, 5

These values are equivalent to `flex: [1, 2, 3, 4, 5] 1 0`. The item's width or height (depending on whether the layout is horizontal or vertical) is ignored, and the item is sized proportionally to other items that are similarly configured. For example, if there are two items, and the first has a `flex` value of 2 while the second has a `flex` value of 1, the first item will be twice the width (or height) of the second item (assuming there are no maximum/minimum or content constraints on how the items are sized).

Grow

This is used to control the way that an item can grow to take up available space. The default value, zero, prevents an item from growing. If a number that is greater than zero is used, the item will grow to take up available space, but will not exceed its maximum width (for horizontal layouts) or maximum height (for vertical layouts), as specified in the Dimensions section of the Box Inspector. Flex items grow proportionally to their `grow` value. For example, if there are three items and two of these have a `grow` value of 1, while the third has a `grow` value of 2, the third item will grow by twice the amount of the other items.

It's also possible to use float numbers. If float numbers between 0 and 1 are used, and the total is less than 1, some space will remain unallocated. E.g. in

the case of three items with a `grow` value of 0.25, there will be 25% of space that is unallocated.

Shrink

This is used to control the way that an item can shrink to fit within the available space. A value of zero prevents an item from shrinking. If a number that is greater than zero is used, the item will shrink to fit within the available space, but will not shrink beyond its minimum width (for horizontal layouts) or minimum height (for vertical layouts). Flex items shrink proportionally to their `shrink` value. For example, if there are three items and two of these have a `shrink` value of 1, while the third has a `shrink` value of 2, the third item will shrink by twice the amount of the other items. The default value is 1.

Items are not shrunk if they can be wrapped.

Basis

This setting is used to determine the basic size of a flex item along its main axis. In the case of horizontal layouts, it is used to determine the item's basic width (before it is grown or shrunk), while in the case of vertical layouts it is used to determine the item's basic height. For example, a value of 200px sets a basic width of 200px within a horizontal layout, and overrides whatever value is set for `Width` in the `Dimensions` section of the `Box Inspector`.

There is also a special value, `auto`, which causes the `Width` or `Height` value (in the `Dimensions` section of the `Box Inspector`) to be used for horizontal or vertical layouts respectively.

Another special value, `content`, causes the width or height to be determined by the box's contents—this is equivalent to using `auto` when the width or height is undefined. Flex items resemble absolute-positioned items in that undefined width or height causes the width or height of a box to grow to fit its contents.

Note: Xway does not yet support `content` as a value for `basis`, but using `auto` with undefined width or height has the same effect (and is more widely supported in browsers).

The default value for `basis` is dependent on whether a `grow` value is specified. If it is, the default value is 0. If not, the default value is `auto`. These default

values are designed to be appropriate to the context in which they are used (see below), so you generally don't need to specify `auto` or `0` as a value.

Note that a **basis** value of zero causes items to be sized in direct proportion to their **grow** value: since the item starts off with zero width or height, its calculated size (before it is constrained by maximum or minimum widths/heights) is determined by its **grow** value rather than by a combination of its initial width/height and **grow** value.

*Note: This is why the CSS default value for **basis** is different depending on whether a **grow** value is specified. If a **grow** value is not specified, **basis** defaults to **auto** because a default value of zero would result in a zero-width (or zero-height) item (since the default value of **grow** is zero). If, on the other hand, a **grow** value is specified, having a default value of zero for **basis** provides a more direct way of controlling the item's size via its **grow** value.*

Align

This allows an item to override its container's default **Align Items** setting, and has the same possible values—plus **Auto** (the default value), which means “don't override”.

Flex items and left/right auto margins

Left and right auto margins on flex items are similar to left and right auto margins that are applied to container boxes outside of flex layout: any remaining space that is available in a line is assigned to the auto margins. In non-flex layout, this allows container boxes to be left-aligned, or centered, or right-aligned (see [Box margins](#), page 111).

The situation is a little more complicated with flex layout, because there can be several boxes on a line, but auto margins may be used to separate groups of items. For example, adding a left auto margin to the last item on a line (in a horizontal and forwards layout) will cause it to be separated from previous items. The effect is that the final item is right-aligned. If you add a left auto margin to the second-to-last item on a line, the last two items will be right-aligned. Another possibility is to add a right auto margin to the first item on a line and a left auto margin to the last item on a line: the first item will be left-

aligned, the last item will be right-aligned, and the remaining items will be centered within the available space.

A simple way to add auto margins in Xway is to choose **Left**, **Center**, or **Right** from the **Align** popup in the **Margins and Alignment** section of the **Box Inspector**. You can also remove auto margins by choosing **Unaligned** from this popup.

Note: If you use left/right auto margins in a horizontal layout, justification properties will have no effect on any line that contains items with left/right auto margins (any available space has already been allocated to the auto margins). Auto margins are more usefully applied to horizontal layouts when wrapping is turned off than when it is turned on.

For vertical (column-based) layouts, left/right auto margins will cause items to be horizontally aligned within their column.

Images, videos, and audio files

Images, videos, and audio files can be used as flex items, but there are some additional considerations that it is helpful to know about:

1. Images, videos, and audio files do not generally shrink from their normal size unless a minimum size is defined. In the case of horizontal (non-wrapping) layouts, setting a minimum width will allow images etc. to shrink to the defined minimum width.
2. If cross alignment (**Align Items** in the **Flex Container** section of the **Box Inspector**, and **Align** in the **Flex Item** section) is set to **Stretch** (the default option), images may be stretched in that direction (vertically for horizontal layouts) and their aspect ratio may be distorted. You can prevent this from happening by choosing a different cross alignment (such as **Start**, **End**, or **Center**).
3. Video may also be stretched, although in this case it is the box rather than the video content that is stretched. (To understand the difference, try setting a background color or border.)

Inline boxes

Inline boxes (images, videos, audio files, and iframes) are not embedded within paragraphs when they are used in flex containers.

Note: Inline boxes are embedded within paragraphs when they are used in text containers because this allows them to be aligned (e.g. centered or right-aligned) using text-alignment controls.

When a text container is converted into a flex container, Xway automatically removes paragraph wrappers. Conversely, if a flex container is converted into a text container, Xway automatically adds paragraph wrappers.

Absolute-positioned flex items

Flex layout has no effect on absolute-positioned flex items that have a defined horizontal and vertical position, but—as is also the case with absolute items that are within a text container—it does affect items that do not have a defined horizontal and/or vertical position. Absolute-positioned items that do not have a defined horizontal or vertical position are positioned as if they are the only item within a container: they are individually aligned vertically and horizontally according to flex direction, wrap, justify, and align values. Grow, shrink, and basis settings (and flex shorthand for these settings) are irrelevant to absolute-positioned items.

*Note: There is a discrepancy between how Safari/Chrome/Xway calculate the cross-axis alignment of absolute items and how the current version of Firefox calculates it: Safari/Chrome/Xway calculate from the **align-item** value (**align-items/align-self**) while Firefox calculates from the **align-content** value. Safari and Chrome are following the CSS spec (which specifically mentions **align-self** in connection with absolute items) while Firefox is wrong. The **align-content** value is for aligning blocks of content rather than individual items.*

Flex containers and master content

Flex and text containers can both use master content, but Xway turns off and disables the Use Master Content checkbox (in the Content section of the Box Inspector) if a flex container that is derived from a master page is converted into a text container (and vice versa). This is because flex and text containers

may contain different content (e.g. flex containers do not contain text and do not use paragraph wrappers around images and other inline boxes).

Flex items and links

Xway does not allow you to attach a link to a box that is a flex item. This is because flex items are children of a flex container, but an attached link inserts a link between a box and its container (a box that has an attached link is a grandchild of its container). You can work around this by wrapping another box around the box that you wish to add a link to: use cut and paste to insert the box into a new parent that will be the flex item, and then set a link on the child box. If the child box is an image, you could also set it to have 100% width so that it expands to the width of its parent.

Note: Xway automatically adds wrapper boxes around boxes with attached links if you convert a non-flex container into a flex container.

Using Flexbox

Flexbox has many practical uses. Here are a few examples:

Responsive layout

Using a horizontal layout with wrapping turned on is a good way to create flexible layouts that adjust to different device sizes. On a wide screen there may be space for several boxes to be displayed side-by-side, while on a narrow screen boxes can wrap so that they are displayed vertically.

There are two ways to create a simple responsive layout. The first (auto layout) sets a defined width on flex items, while the second (proportional layout) sets a proportional width and uses minimum and maximum widths to control the way that flex items grow and shrink.

The first steps in either case are as follows:

1. Insert a box and set it to be a flex container by selecting the **Flex Container** checkbox in the **Style** section of the **Box Inspector**.
2. Choose **Wrap** from the **Wrap** popup in the **Flex Container** section of the **Box Inspector** to turn on wrapping.

3. Insert some boxes (flex items) within the flex container.

Auto layout

The next steps, for auto layout, are:

4. Select the boxes that you have inserted and choose **Auto** from the **Flex** popup in the **Flex Item** section of the **Box Inspector**. This will cause the boxes to grow or shrink to fit within their container. Now, set a defined width (e.g. 400px) using the **Width** field of the **Dimensions** section of the **Box Inspector**. (It is also possible to set a defined width using the **Basis** field of the **Flex Item** section of the **Box Inspector**—this makes no difference to the end result.)
5. Consider setting a maximum width, since it is hard to read long lines of text on large screens. This can also help to improve aesthetic appearance, by ensuring that a box (or boxes) in the final row is not much wider than previous boxes.
6. Set other properties (horizontal and vertical alignment, column gaps and row gaps) by selecting the parent container and using the controls in the **Flex Container** section of the **Box Inspector**.

Proportional layout

For proportional layout, use the following steps:

4. Select the boxes that you have inserted and choose **1** from the **Flex** popup in the **Flex Item** section of the **Box Inspector**. This will cause the boxes to grow or shrink to fit within their container. You can also assign different numeric values to separate boxes: if you choose **2** for one of the boxes, it will normally be twice as wide as boxes with a flex value of **1** (unless constrained by minimum and maximum widths).
5. Set a minimum width on the flex items, to control how far they can shrink. Be careful when doing this: if you set a minimum width that is greater than 300px, items may not fit in the horizontal space that is available on small screens, and users will have to scroll horizontally to see them. See [Flex layout and media styles](#) (below) for how you can use media styles to deal with this.

6. Consider setting a maximum width, since it is hard to read long lines of text on large screens. This can also help to improve aesthetic appearance, by ensuring that a box (or boxes) in the final row is not much wider than previous boxes.
7. Set other properties (horizontal and vertical alignment, column gaps and row gaps) by selecting the parent container and using the controls in the Flex Container section of the Box Inspector.

Centering

Flexbox makes it easy to create layouts in which boxes are vertically centered within their containers. This was notoriously difficult to achieve previously.

Footers

Flexbox allows footers to be aligned with the bottom of their containers. To do this, you can use a column layout in which a footer box with a `grow` value of zero follows another box with a `grow` value of 1. This ensures that any vertical space that is available in the flex container is added to the first box (before the footer) rather than after the footer (as would happen otherwise).

Media descriptions

Flexbox can be used to add descriptions alongside (to the left or right of) images and other media content. To achieve this, insert an image (or other media content) within a flex container that has horizontal layout, then add a second box containing its description. To reverse the media box and its description, so that the description comes first, choose **Row Reverse** for the container's **Direction**.

Flex layout and media styles

Media styles can be used to improve the way that flex layouts work at different screen sizes.

Minimum width for flex items (proportional layout)

In the *Responsive layout* section above, we noted that if you use proportional flex layout and set a minimum width that is greater than around 300px for flex

items, this can cause layout issues on small screens. Media styles provide a way to get around this: you can set a minimum width that is suitable for wider screens, and add a media style that changes this for small screens.

1. Select the flex items within a flex container and set a minimum width that works well for wider screens (let's say 500px).
2. Select the parent flex container, perhaps by choosing **Select Parent** from the Edit menu or by using its associated shortcut ($\text{⌘} \text{⌘} \blacktriangle$).
3. Open the **Media Styles** section at the bottom of the Box Inspector.
4. Click on the plus button, to display the **Media Style** dialog.
5. Choose **Children of Item** from the **Selector** popup. This creates a CSS selector that targets children of the flex container (the flex items).
6. Set a breakpoint that is a bit larger than the default minimum width (let's say 600px).
7. Click on the plus button at the bottom of the **Media Style** dialog, and enter **min-width** as the property name and 300px as the property value.

Defined width for flex items (auto layout)

You might also want to change the defined width that you use with auto flex layout (see [Auto layout](#), above). In this case, CSS will automatically shrink or grow boxes to fit the available space, and you don't necessarily need to make any adjustments, but you might want the basic (default) width to be larger on wider screens.

1. Select the flex items within a flex container and set a defined width that works well for wider screens.
2. Select the parent flex container, perhaps by choosing **Select Parent** from the Edit menu or by using its associated shortcut ($\text{⌘} \text{⌘} \blacktriangle$).
3. Open the **Media Styles** section at the bottom of the Box Inspector.
4. Click on the plus button, to display the **Media Style** dialog.
5. Choose **Children of Item** from the **Selector** popup. This creates a CSS selector that targets children of the flex container (the flex items).
6. Set an appropriate breakpoint.

7. Click on the plus button at the bottom of the Media Style dialog, and enter width as the property name. Enter a value that works well for smaller screens.

Justify content: space between

One of the Justify Content options in the Flex Container section of the Box Inspector is Space Between. This is useful if you want to align two boxes to the left and right of a header or footer, but it can cause problems if the boxes wrap on small screens: in this case we probably want the boxes to be centered (as happens with the Space Around option) rather than left-aligned (as happens by default). We can use a media style to do this.

Let's assume that we have a flex container containing two boxes:

1. Insert a box and set it to be a flex container, then set it to wrap, and add a 10px column gap and row gap. Choose Space Between from the Justify Content popup.
2. Insert two boxes within the flex container, choose 1 from the Flex popup, and set minimum and maximum widths of 300px and 400px (respectively).
3. Give the boxes a background color.
4. Test the layout by switching to Xway's Web view, then shrink the width of the Web view by dragging the divider between it and the Inspector panel. At the point where it is no longer possible to display the boxes on the same row, they wrap and are left aligned.

To fix this:

1. Switch back to the Layout view, and select the flex container.
2. Click on the plus button at the bottom of the Media Styles section in the Box Inspector.
3. Choose Item from the Selector popup. This creates a selector that targets the flex container.
4. Set a breakpoint of 610px.

5. Click on the plus button at the bottom of the Media Style dialog, and enter `justify-content` as the property name and `space-around` (or `center`) as the property value.

This ensures that when it is no longer possible for the boxes to be displayed on the same row, they become centered rather than left-aligned. Test that this works by switching to Xway's **Web** view.

Why 610px for the breakpoint? In this case, the minimum space required to display two boxes on a line is two times 300px (the minimum width of the boxes) plus 10px (the column gap). An alternative way to calculate breakpoints is to choose an approximate value and adjust this after seeing how it works. See [Testing responsive layouts](#) below.

For more information on media styles, see [Media styles](#) (page 98).

Testing responsive layouts

A good way to test responsive layouts is to view them in Safari and choose Enter Responsive Design Mode from the Develop menu. If you don't see this menu in the menu bar, choose Settings from the Safari menu, click Advanced, and select Show features for web developers. When looking at a website in this mode, choose 320px as a minimum width (for small phones) and check that a layout also looks good up to 1600px or so.

Appendix 1: New features

Xway 1.2

1. Metadata dialogs provide an easy way to manage meta tags and related metadata. See [Chapter 15: Metadata](#).
2. Locking content. See [Locking content](#) (page 55), [Locking master content](#) (page 86), and [Structuring a master page](#) (page 89).
3. Box corners. See [Corners](#) (page 107).
4. Commands for adding pages and folders have been moved into a separate Page menu, which also contains other page-related commands.
5. Xway remembers the scroll position of different Inspector panels.

Xway 1.1

1. Media styles. See [Media styles](#) (page 98) and [Flex layout and media styles](#) (page 191).
2. Xway can download and install new or updated templates. See [Installing templates](#) (page 205).
3. Text import. See [Importing text](#) (page 68).
4. The Tidy command can be used to tidy text. See [Tidying text](#) (page 79).
5. WebP graphics. See [WebP graphics](#) (page 128).
6. Smooth scrolling. See [Scroll behavior](#) (page 114).
7. Permanent resources are always published. See [Custom resources](#) (page 124).
8. Uploading is significantly faster, unless the Prefer high-resolution data comparisons checkbox is selected. See [Prefer high-resolution data comparisons](#) (page 33).

9. The Upload dialog contains separate Lock and Show Password checkboxes (passwords can now be changed without being shown). See [Password](#) (page 33).
10. Other improvements to the Upload dialog.

Xway 1.0.1

1. Check Document can fix deeply nested spans in imported Freeway documents. See [Fixing document problems](#) (page 29).

Xway 1.0

1. Xway can open Freeway documents. See [Appendix 3: Importing a Freeway website](#).
2. Xway can upload sites. See [Uploading](#) (page 31).
3. Xway templates. See [Creating a new document from a template](#) (page 27) and [Appendix 2: Templates](#). The following templates are available (for free) from our website: Ambient, Ambient Light, Assistant, Esperanto, Fleet, Health, Macro, Portfolio, Retro'd, SecondSight, Serenity, Smile, Snapper, TheBand, and Tranquil.
4. Navigation menu improvements:
 - a. Menu items can have master menu items.
 - b. The Box Inspector displays a Text section for menu items. This can be used to set different text colors (etc.) for specific menu items (e.g. to indicate which is the current page).
 - c. It's possible to set the size of a menu's hamburger icon, or have it be calculated automatically (as before). See [Hamburger Size](#) (page 144).
 - d. You can define a horizontal inset that is used to inset menu items within a left- or right-aligned menu. See [Horizontal Inset](#) (page 143).
 - e. Line breaks can be added within menu items.
 - f. Baselines are aligned (on output) in menu items.

- g. Pages are prevented from scrolling behind hamburger menus. See *Menu JavaScript* (page 145).
- h. Hamburger menus are closed after linking to sections on the same page. See *Menu JavaScript* (page 145).
- 5. If you choose a folder when locating a missing or inaccessible resource, Xway automatically locates other missing or inaccessible resources that are in the same folder. See *Locating resources* (page 125).
- 6. Xway provides Subject, To, CC, BCC, and Body fields for mailto links, along with an Obfuscate checkbox that makes it more difficult for spam bots to harvest these links. See *Mailto links* (page 135).
- 7. You can check for and install updates from within Xway. See *Updates* (page 24).
- 8. Xway defines additional fonts, including: Charter, Didot, Georgia, and Palatino (serif fonts); Avenir, Gill Sans, Optima, Trebuchet MS, and Verdana (sans serif); Menlo (monospace); and Bradley Hand (cursive). See *System fonts and web fonts* (page 121).
- 9. JavaScript can be added at the end of the body section of a page (as well as within the head section). See *JavaScript markup* (page 159).
- 10. Z-index can be set for non-positioned flex items (e.g. images with “None” position).
- 11. Styles that are applied directly to links take precedence over default link styles.
- 12. Xway supports negative vertical margins for boxes, paragraphs, and lists. See *Margins* (page 111).
- 13. Check Document command. See *Fixing document problems* (page 29).
- 14. Class values that are entered in the Extended HTML Attributes section of the Box Inspector are appended to existing class values instead of replacing them. See *Extended HTML attributes* (page 155).
- 15. Download attribute for resource links. See *Resource links* (page 134).
- 16. Min/max dimensions are displayed in the Dimensions section of the Box Inspector (instead of within a separate Min/Max Dimensions section).

Another change: widths are grouped with minimum/maximum widths, and heights with minimum/maximum heights.

17. Duplicate in the Edit menu has been renamed as Duplicate Selection, to avoid confusion with Duplicate in the File menu.
18. Export in the File menu has been renamed as Export Site, and Export As has been renamed as Export Site To (to avoid confusion with Export As in other applications, where it typically refers to exporting a document in a non-native format).

Xway 0.8b8

1. Lists. See [Lists](#) (page 74).
2. Sticky position. See [Sticky position](#) (page 59).
3. Display and visibility properties. See [Display](#) (page 109) and [Visibility](#) (page 114).
4. Maximum width and maximum height fields for dynamic styles. See [Dynamic styles](#) (page 94).
5. Dynamic target styles. See [Dynamic styles](#) (page 94).
6. You can export a site by choosing Export (or Export As) from the File menu. This duplicates the contents of the Site folder to an external folder, which can be uploaded using a third-party application. See [Exporting a site](#) (page 31).
7. Show Site Folder has been removed from the File menu (it is replaced by Export and Show Export Folder).
8. Empty Site Folder in the File menu can be used to delete the contents of a document's internal Site folder. See [Site folder](#) (page 30).
9. Box offsets are displayed in a separate Offsets section of the Box Inspector, just above the Dimensions section (instead of within the Dimensions section).
10. Hamburger menus can be set to display below a defined breakpoint, always, or never. See [Show Hamburger](#) (page 144).

11. The alignment of hamburger menu items can be set to Left, Center, or Right. See [Hamburger Menu Align](#) (page 145).
12. If a folder is selected in the Site panel (and the user has not displayed a contextual menu on a different folder), new pages and folders are added within this folder—except when this is incompatible with the type of page being inserted (e.g. choosing **New Master Page** always inserts a master page, and choosing **New Page** always inserts a site page). See [Creating a new page](#) (page 43) and [Creating a new folder](#) (page 43).
13. If a folder is selected in the Site panel (and the user has not displayed a contextual menu on a different folder), copied pages and folders are pasted within this folder. See [Copying and pasting pages and folders](#) (page 44).
14. The Site panel automatically expands ancestor items when new items (folders/pages/boxes) are added.

Xway 0.7b7

1. Flexbox (CSS Flexible Box Layout). See [Chapter 16: Flexbox](#).
2. Code spans. See [Adding spans](#) (page 71) and [Code](#) (page 73).

Xway 0.6b6

1. Navigation menus. See [Chapter 11: Navigation menus](#).
2. Support for SVG graphics. See [Background image](#) (page 104), [Graphics](#) (page 127), and [Favicons](#) (page 131).
3. Full support for fixed-position boxes in the Page view. See [Box position](#) (page 58).
4. Web and HTML views are no longer disabled for master pages (Xway switches temporarily to the first site page that derives from this master). Similarly, **Preview** in the File menu is no longer disabled for master pages (Xway previews the first site page). See [Previewing pages](#) (page 51), [Viewing HTML output](#) (page 51), and [Previewing](#) (page 30).

5. The Enter key (on extended keyboards) can be used as an alternative to Command-Return to begin or end editing.

Xway 0.5b5

1. Master pages. See [Chapter 6: Master pages](#) for detailed information, including instructions on how to convert old-style template pages into master pages. Xway's implementation of master pages improves on Freeway's in a number of ways. One improvement is that master pages can have their own master pages. It's also possible to delete a master page without having to delete instance pages, and to change the master page that is set on an instance page without losing or duplicating existing content.

Xway 0.4b4

1. Dynamic styles (for rollover effects). See [Dynamic styles](#) (page 94).
2. Links can be applied to container boxes. See [Adding links](#) (page 133) and [Styling links](#) (page 136).
3. Links that are applied to boxes are copied/moved with their boxes. (This applies to content boxes (such as images) as well as container boxes, but not if the link was added in a previous version of Xway.)
4. You can insert a line break by typing Control-Return or by choosing Line Break from the Insert menu. See [Line breaks](#) (page 70).
5. You can insert a non-breaking space by typing Option-Space or by choosing Non-Breaking Space from the Insert menu. See [Non-breaking spaces](#) (page 70).
6. Subscripts and superscripts. See [Adding spans](#) (page 71), [Subscript](#) (page 73) and [Superscript](#) (page 74).
7. Previews are drawn for component boxes.
8. It is easier to locate missing resources. See [Locating resources](#) (page 125).
9. Iframe boxes that contain YouTube and Vimeo videos can be adjusted to fit their content. See [Video aspect ratio](#) (page 152).

10. Display size can be set for markup and component boxes. See [Markup items](#) (page 157) and [Using components](#) (page 165).
11. There are keyboard shortcuts for switching between the Page view (^⌘P), Web view (^⌘B), and HTML view (^⌘H).
12. The Link Inspector displays a Content section for resource links. See [Resource links](#) (page 134).
13. The Box Inspector displays a Content section for markup files. See [Markup items](#) (page 157).
14. The Text menu has been replaced by a Format menu.
15. The Page and Item menus have been removed, and items that were previously in the Page menu have been redistributed: navigation commands (Go Back etc.) have been moved to a new Go menu, while New Page and New Folder have been moved to the Insert menu.
16. Pages in the Site panel default to being closed when a document is opened, except for the current page.
17. Home/End (Fn◀ / Fn▶) scroll to the top/bottom of the page.
18. The toolbar appearance has been improved for Big Sur.
19. Xway runs natively on Intel or Apple Silicon.

Note: You can use a contextual menu to display resource files in the Finder or open them in an editing program. See [Resource information](#) (page 124) and [Markup items](#) (page 157).

Xway 0.3b3

1. Components can be used to import Exhíbeo galleries and other content. See [Chapter 14: Components](#).
2. Pages and folders can be copied and pasted. See [Copying and pasting pages and folders](#) (page 44).
3. Boxes can be copied and pasted. See [Copying and pasting boxes](#) (page 54).
4. Text can be copied and pasted. See [Copying and pasting text](#) (page 68).
5. Folders can be duplicated. See [Duplicating pages and folders](#) (page 45).

6. Favicons can be added. See *Favicons* (page 131).
7. Web view. See *Previewing pages* (page 51).
8. HTML view. See *Viewing HTML output* (page 51).
9. Absolute boxes (as well as inflow boxes) can be duplicated by Option-dragging. See *Moving boxes with the mouse* (page 62).
10. The content of markup items can be taken from an external text file. See *Markup items* (page 157).
11. Cookies can be disabled for YouTube videos. See *Disable Cookies* (page 150).
12. Flow Root checkbox. See *Flow root* (page 109).
13. Extended attribute/property names and meta tag names can be edited. See *Extended HTML attributes* (page 155).
14. The Site panel can be hidden or shown. See *Site panel* (page 39).
15. The Inspector panel can be hidden or shown. See *Inspector panel* (page 39).
16. The way that h1, figure, and link elements are styled within Xway matches the way that they are styled in browsers.
17. Auto punctuation (replacing double space with “. ”) is disabled in markup fields.
18. Hex values that are preceded by # can be pasted into hex color fields.
19. Improvements to YouTube and Vimeo iframe previews.
20. Iframes have a default content size of 300x150 (as in browsers).

Xway 0.2b2

1. Resources view. See *Editing resources* (page 123).
2. Pasted graphics. See *Graphics* (page 127).
3. Xway imports (and converts) graphics that are not in a web format. See *Graphics* (page 127).
4. External resources. See *External resources* (page 131).

5. Insert Resource dialog. See *Adding resources* (page 123).
6. The Box Inspector contains a Content section, which displays information about resources, and allows resources to be replaced, detached, or located (if missing). See *Resource information* (page 124), *Replacing content* (page 126), *Locating resources* (page 125), and *Detaching resources* (page 127).
7. Modified resources are automatically updated. See *Modified resources* (page 127).
8. Plays Inline attribute for videos. See *Plays Inline* (page 130).
9. Iframes (YouTube videos, Vimeo videos, maps etc.) See *Chapter 12: Iframes* (page 147), *YouTube videos* (page 149), *Vimeo videos* (page 151), *Adding a Google map* (page 153), *Adding an OpenStreet map* (page 153).
10. Inflow boxes can be moved or duplicated by dragging. See *Moving boxes with the mouse* (page 62).
11. Language can be specified for pages and documents. See *Language* (page 78).
12. Meta tags. See *Chapter 15: Metadata*.
13. Generic markup. See *Generic markup* (page 159).
14. Extended page attributes can be added to a page's head and html elements (as well as to its body element). See *Extended page attributes* (page 155).
15. Default extended page attributes can be added in the Document Inspector. See *Extended page attributes* (page 155).
16. Clearing or resetting the Name/ID field of a resource box will generate a default ID based on the name of the resource. See *ID* (page 57).
17. You can reset the IDs of multiple boxes by typing a space in the Name/ID field. See *ID* (page 57).
18. Fixed background images are drawn with fixed attachment within Xway. See *Attachment* (page 105) for information on background attachment.
19. Clicking anywhere in the title bar of an Inspector section will hide or show that section (you don't have to click directly on Hide/Show).

20. Pressing **Command-Return** switches from the **Site** panel and starts editing. See *Site panel* (page 39).
21. Improved Dark Mode support (icons are easier to read).
22. Markup and Extended sections in the Inspector panel grow in height (as well as width) when the Inspector is widened.

Xway 0.1b1

First public beta.

Appendix 2: Templates

Introduction

This appendix lists templates that are available from our website. They have responsive layouts which automatically adjust to fit any device, and they are free for you to use and adapt. Some of them originated as Freeway templates that were opened in Xway and tidied up using flex layout and other Xway features.

Installing templates

To install or update templates, choose **Install Templates** from the Xway menu. This will download and install the latest templates that are compatible with the version of Xway that you are using. If you haven't previously chosen a templates folder, Xway will display a file dialog that allows you to create a new folder or choose an existing folder. If you choose the Documents folder, Xway creates a folder called "Xway Templates" within this folder.

Working with templates

To create a new document from a template, choose **New from Template** from the File menu, and select a template document that you wish to use. Xway will create a new untitled document from this template.

Web fonts

Some of these templates use Google web fonts. It helps if you download these from fonts.google.com (we've added links below) and install them via Font Book (which you can find in your Applications folder) so that Xway can use them. People who visit your website will not need to download them—they're downloaded by browsers as the pages are displayed.

If you wish to use different fonts, edit default styles in the **Default Styles** section of the Document Inspector or in the **Default Styles** section of the Page Inspector for a master page. Start with the Document Inspector, and look for

styles that have **Inherit Default Style** turned off (these have properties that have changed from CSS default properties). Then move on to the **Page Inspector** for a master page and look for styles that have **Use Master Style** turned off (these have properties that have changed from the default document properties).

Social media links

Most of these templates contain social media links. You will want to change these so that they link to your own media pages, or remove them by deleting the icons. Do this on a master page, so that your changes are carried through to all the site pages. Some templates contain master pages that depend upon other master pages, so choose the first master page in these cases.

Contact links

Some of these templates were converted from Freeway templates that contain contact forms. Because Xway does not currently support forms, and because contact forms have become problematic as a result of anti-spam measures, we've replaced them with obfuscated mailto links (which you will need to edit), but we've left the success and error pages intact, although they're set not to publish. They might be useful if you use an online form service to create contact forms, or you can delete them.

Adding content

We've used placeholder (lorem ipsum) text which you can replace with your own content. You may also want to replace images with your own images. If you need to add new sections, the easiest way to do this is to duplicate an existing box and change the images and text within it.

Colors

If you want to change the colors that are used in templates, you can do so by editing (and perhaps renaming) them in Xway's Colors view.

Images

The images that are used in these templates are taken from picjumbo.com, www.gratisography.com, and other free-image sources.

Slideshows

Some templates (such as SecondSight) contain fading slideshows that are powered by JavaScript. These can be adapted and extended (see below). If you wish to use them in other documents, copy/paste the box containing the slideshow, then copy/paste the JavaScript in the JavaScript Markup section of the Page Inspector (choose Body from the popup at the top of this section).

Note that slideshow images have been given a class attribute of slide (in the Extended HTML Attributes section of the Box Inspector), and apart from the first image they also have zero opacity and hidden visibility (Opacity and Visibility in the Style section of the Box Inspector).

Design notes

Most of these templates have a three- or four-part master-page structure: header/main/footer or header/menu/main/footer. The header, menu, and footer sections contain content that is shared across pages (Use Master Content and Use Master Style etc. are turned on) while the main section contains content that is unique to each page.

Some of these templates use wrapper boxes: header-wrapper within header, main-wrapper within main etc. This is a design technique that is used to set a maximum width for text content (long lines of text are difficult to read), while allowing the actual sections (header, main etc.) to have backgrounds that stretch across the width of the page.

Flex layout is used to create responsive layouts that don't require multiple breakpoints. If you're not familiar with flex layout, there is an Xway flexbox tutorial that could be helpful. In a nutshell, flex layout allows boxes to be flexibly arranged in rows (or columns) that can wrap to fit different screen sizes. Boxes that hold flexibly arranged items are known as "flex containers", while the boxes that are inside these containers are known as "flex items". In the most common case, where flex items are arranged in rows, we've found that it helps to set a minimum width of 300px, so that the items wrap without becoming squashed, but will still fit on a narrow device such as a small mobile phone. We've also set a maximum width of around 500px in many cases, so that boxes do not become excessively stretched.

We've used flexible CSS units in some of the layouts. In cases where there is horizontal padding within the header/main/footer sections, we've sometimes specified this in vw units rather than in pixels: vw stands for "viewport width" and a vw unit is one hundredth of the width of the viewing area (e.g. the width of a mobile device, or the content width of a browser window). A value of (e.g.) 2vw for horizontal padding will be smaller on narrow devices (where space is at a premium) than on wide devices: on a small (320-pixel wide) phone, 2vw is just over 6 pixels.

A good way to test responsive layouts is to use Safari's Responsive Design mode: see [Testing responsive layouts](#) (page 194).

Help and advice

If you need further help or advice, ask in our [discussion forums](#).

Available templates

Ambient

Ambient is a general-purpose website. It is based on a document that was created by following steps in the Xway tutorials: Xway Tutorial, Xway Menu Tutorial, and Xway Flexbox Tutorial.

Ambient Light

Ambient Light is a variant of the Ambient template. Like Ambient, it is based on a document that was created from the Xway tutorials: Xway Tutorial, Xway Menu Tutorial, and Xway Flexbox Tutorial.

Assistant

Assistant is a professional-looking website. With large hero images and sleek text styling, it could be suitable for accountancy firms, law firms, and similar executive professions.

Assistant uses the [Roboto](#) web font.

*Note: Assistant has a five-part master-page structure: top-spacer, header, menu, main, and footer. The **top-spacer** box adds a black line that remains visible when the page is scrolled. If you'd like to remove this, delete the box (on the master page), and also*

change the top offset of the menu box to 0px (instead of 4px) in the Offsets section of the Box Inspector.

DSGN

DSGN is a website for a design agency or service company.

DSGN uses the [Inconsolata](#) web font.

CSS animations

DSGN contains boxes that move upwards and fade into view when a page is displayed or scrolled. JavaScript is used to trigger animations when a box scrolls into view, but if JavaScript is not available animations happen when a page is first displayed. The JavaScript code can be found in the JavaScript Markup section of the Document Inspector, while CSS animation properties are defined in the CSS Markup section of the Document Inspector. Alternative CSS animation properties for when JavaScript is not available are defined (within a noscript section) in the Generic Markup section of the Document Inspector (before </head>).

If a user has chosen Reduce Motion as an accessibility option (e.g. via the Accessibility/Display section of System Preferences on Mac computers), boxes fade into view but do not move when they are animated.

Animated boxes have their class set to animate in the Extended HTML Attributes section of the Box Inspector.

See [CSS animations](#) (page 160) for more information on CSS animations.

Esperanto

Esperanto has a classic modern appearance. It is a single-page design with a navigation menu that links to different sections of the same page.

Esperanto uses [Mate](#) and [Montserrat](#) web fonts, and has an Exhíbeo slide show.

Fleet

Fleet is a taxi-company website, but it could easily be adapted for other service-based companies.

It uses the [Ubuntu](#) web font.

Health

Health is a website that is suited to health and wellbeing websites, such as dental practices, health centers, or alternative therapists.

It uses [Open Sans](#) and [PT Sans](#) web fonts.

Update: Health 1.1 uses media styles (instead of CSS markup) to change the alignment of header items on small screens.

Macro

Macro is a photography website, featuring large images. It uses a scrolling navigation bar for submenus, and takes advantage of Xway's support for multiple master pages (master pages that are based on other master pages).

Macro uses [Roboto](#) and [Geostar](#) web fonts.

Portfolio

Portfolio is a template for showcasing a portfolio of work. It uses a scrolling navigation bar for submenus, and takes advantage of Xway's support for multiple master pages (master pages that are based on other master pages).

The easiest way to extend a menu or submenu is to duplicate an existing menu item.

Portfolio uses the [Lato](#) web font.

Retro'd

Retro'd has an attractive retro appearance and has been created with a design company in mind, but would be equally good for other businesses. It's a single page layout.

Retro'd uses the [Montserrat](#) web font.

SecondSight

SecondSight is a business-oriented website. With large hero images and bold, vibrant text styling, it can be used for agencies and other corporate service-

related businesses.

SecondSight uses [Montserrat](#) and [Pontano Sans](#) web fonts.

Fading slideshow

The hero images have been arranged as a fading slideshow, which can be easily adapted and extended. It uses background images which can be replaced using the Background section of the Box Inspector. To add more images, duplicate any of the image boxes (apart from the first image box) in section1 of the main section on the home page. The JavaScript that is used to switch between slides can be found in the JavaScript Markup section of the Page Inspector: choose Body from the popup at the start of this section (the JavaScript is added at the end of the body section of the page, so that it runs when the page has loaded). If you want to change the duration of each slide, replace 3000 (3000 milliseconds = 3 seconds) with a different number—just before a comment that says “Change image every 3 seconds”. To change the length (or type) of transition, select the slide images and change the transition property in the Extended Properties section of the Box Inspector. Slide images have their class set to slide in the Extended HTML Attributes section of the Box Inspector.

Serenity

Serenity is a worship/spirituality website, with a clean and uncluttered design.

It uses [Open Sans](#) and [Oswald](#) web fonts.

Smile

Smile is a bright and vibrant website. Designed to be used as a children's daycare or nursery site, it could also be used for any site that is intended for kids.

It uses [Lilita One](#) and [Open Sans](#) web fonts.

Snapper

Snapper is a stylish website for photographers and artists.

It uses the [Alegreya](#) web font.

TheBand

TheBand is a website for bands and musicians. It could also be adapted for other purposes.

It uses [Lato](#) and [Righteous](#) web fonts.

Tranquil

Tranquil is a dark and stylish website. The images are suitable for a garden landscaping company website, but with new images and colors it would also work well as a website for other outdoor services.

The Gallery page is empty: you can add an Exhibeo gallery or any other gallery of your choice.

Tranquil uses [Mulish](#) and “[Nothing You Could Do](#)” web fonts.

Appendix 3: Importing a Freeway website

To open a Freeway document choose **Open** from the **File** menu and select a file that has a **.freeway** extension. Xway should open any document that was created by Freeway Pro or Freeway Express from version 5 onwards. This should preserve most of the content (text, links, resources, markup, meta tags, master pages etc.) and styles (fonts, colors etc.) of the Freeway document. It should also preserve much of the layout in documents that use CSS layout.

Note: If you have a document that was saved by an old version of Freeway (before 5.0), open it in a later version of Freeway and resave it before opening the resaved version in Xway.

You may find it helpful to work through the introductory Xway Tutorial, which is available on our website, if you are not already familiar with Xway. See [Tutorials](#) (page 24).

Summary

To open a Freeway document:

1. Choose **Open** from the **File** menu (shortcut: **⌘O**) and select a file that has a **.freeway** extension.
2. Switch to the **Resources** view and locate resources.

Step 2 is needed because Freeway (unlike most modern Mac applications) is not sandboxed and saves file references without sandbox permissions. When you switch to the **Resources** view, you should see a list of resources whose status is either **Inaccessible** (the resource can be found but Xway cannot access it) or **Missing** (the resource cannot be found). Select a resource that is marked as **Inaccessible** and click on the **Locate** button near the bottom of the **Resources** view. This will open a file dialog that shows the folder containing this resource. Simply press **Return**, or click on **Locate** in the file dialog, and this will give Xway permission to access this resource, along with any other resources that are in the same folder (their status will change from **Inaccessible**

to OK). After you have located inaccessible resources, locate any missing resources in a similar way—you will have to navigate to the folder that contains them, since Xway does not know where they are. When you have found this folder, the **Locate** button in the file dialog will be enabled, and you can click on it or press **Return**. If there are other missing resources in the same folder, Xway will locate them automatically.

*Note: When locating resources, it is better to press **Return** or click on the **Locate** button without selecting the actual resource file. By doing this, you are selecting the folder that contains the file, and giving Xway permission to locate other files that are in the same folder.*

Content

Xway can read most of the content within a Freeway document. This includes text, links, resources (videos, graphics, etc.), markup, meta tags, extended attributes, master pages etc. Xway will discard some forms of content that it does not support, such as forms or tables—although it should import content that is within tables. You may encounter problems with some types of graphic (see below).

Graphics

Freeway supports two types of graphic: pass-through graphics (shown with a green or blue outline) and non-pass-through graphics (shown with a grey outline). Non-pass-through graphics might be combined with other graphics, or sliced on output. This was useful in fixed layouts, but is less useful for modern flexible layouts.

In Xway, all graphics are pass-through graphics. If there are non-pass-through graphics in a Freeway document, Xway will attempt to import them as pass-through graphics. But there are two situations where it may be unable to do this:

1. If a document contains pasted or detached graphics, these do not have an associated graphic file that can be imported.
2. If a document contains graphics that have been scaled down to less than a quarter of their original width or height Xway will not import them. This is to avoid memory problems, since a large pass-through

graphic requires the same amount of memory (in Xway and in browsers) regardless of the size at which it is displayed.

Xway attempts to deal with these situations by importing *published* graphic files (located in a **Resource** folder within the Freeway Site folder) where the original graphic is unavailable or unsuitable. But there are limitations to this approach:

1. Master pages do not publish resources, so Xway is unable to find a published resource for pasted and detached graphics that are used on a master page.
2. If a graphic has been sliced or combined with other graphics, Xway cannot put slices back together, so it imports only the first slice (which might be a small part of the original graphic).
3. If a Freeway document has not been published recently, Xway may be unable to find a published resource.

You can take steps to avoid these problems by using Freeway to update your document before you import it into Xway:

1. Replace pasted and detached graphics with file-based graphics. See [*Exporting and reimporting a graphic in Freeway*](#) (below) for instructions on how to export and reimport graphics in Freeway.
2. Replace scaled-down graphics with graphics that have been exported and reimported by Freeway. See [*Exporting and reimporting a graphic in Freeway*](#) (below). Alternatively, use an external graphic program such as Preview.app to scale graphics. See [*Scaling a graphic in Preview.app*](#) (below).
3. Publish your Freeway document into a clean Site folder, and resave it before you open it in Xway. If there is any possibility that you might republish the Freeway document after you have opened it in Xway, duplicate it before you publish it, and open the duplicated document in Xway (keeping the original document for use with Freeway).

You might not need to do any of this. A good plan would be to try opening your document in Xway, and look through pages to see if there are any missing or low-quality graphics after you have located resources in the

Resources view. Then go back and fix these in Freeway. Alternatively, you could reimport suitable graphics in Xway.

Exporting and reimporting a graphic in Freeway

You can use the following steps to export and reimport a graphic in Freeway:

1. Select the box containing the graphic.
2. If you are using a recent version of Freeway Pro, select the **High-resolution** checkbox in the **Export** pane of the **Inspector** palette. This will ensure that a high-resolution version of the graphic is exported.
3. Choose **Export** from the **File** menu (shortcut: ⌘E), and choose a name and location for the exported graphic. Add a file extension (.jpg for JPEG graphics), since Freeway doesn't do this automatically.
4. Choose **Import** from the **File** menu (shortcut: ⌘E), and select the graphic that you exported.
5. Choose **Original Size** from the **Graphic** submenu in the **Item** menu (shortcut: ⌘K).
6. If you previously selected the **High-resolution** checkbox, go back to the **Export** pane of the **Inspector** palette and turn it off and on again (so Freeway displays the graphic at its correct size).
7. Choose **Modify** from the **Item** menu (shortcut: ⌘M) and click on **Resample** in the **Graphic** dialog. Switch to the **Graphic** pane of this dialog and ensure that the horizontal and vertical offsets are both zero.

Scaling a graphic in Preview.app

You can use the following steps to scale a graphic in Apple's Preview app:

1. Open the graphic.
2. Duplicate it (if you wish to keep the original graphic unchanged) by choosing **Duplicate** from the **File** menu.
3. Choose **Adjust Size** from the **Tools** menu.
4. Choose points from the popup next to the **Width** and **Height** fields.

5. Check the Scale proportionally and Resample image checkboxes.
6. Enter a new width in the Width field.
7. Set the resolution to 144 pixels/inch (high resolution).
8. Press Return or click on the OK button.
9. Save the scaled graphic.

Graphic text

Xway converts graphic text into HTML text.

Links

Xway can import any links that are in your Freeway document, but there is one issue that is worth noting: Xway does not support Freeway “anchors” (instead it allows you to link directly to any box that is on a page). When importing a Freeway document, Xway will identify anchors and will automatically add section boxes around text containing an anchor. Links to anchors are then replaced with links to section boxes.

Forms

Xway does not currently support forms. If you need a contact form, you could use an online form generator to create a form that you would import as a markup item or iframe. You might also use a [mailto](#) link for contact information (but be aware that this might be hijacked by spammers). We recommend asking in the Xway discussion forum if you would like further advice about contact forms or [mailto](#) links. You can visit the Xway discussion forum by choosing Support and Community from Xway’s Help menu.

Tables

Xway does not currently support tables. It will import content that is within tables (table cells are imported as inflow boxes), but it cannot import the actual tables.

Actions

Xway does not support Freeway Actions (we plan to add support for Xway Actions in a future version), but it has built-in support for some of the functionality that is provided by Freeway Actions:

Link to File Actions

Xway converts *Link to PDF*, *Link to File*, *Graphic Link to PDF*, and *Graphic Link to File* Actions into Resource links. See [Resource links](#) (page 134).

Rollover Action

Xway doesn't support JavaScript rollovers, but you can use dynamic styles to create CSS rollovers. See [Dynamic styles](#) (page 94) for information on dynamic styles.

Iframe Action

Xway has built-in support for iframes. See [Chapter 12: Iframes](#).

YouTube and Vimeo Actions

You can use iframes for YouTube and Vimeo videos. Xway has built-in support for YouTube and Vimeo iframes. See [YouTube videos](#) (page 149) and [Vimeo videos](#) (page 151).

Google Maps Action

You can use iframes to add Google and OpenStreet maps. See [Maps](#) (page 153).

CSS Menus Action

Xway has built-in menus which can be used to replace menus created with the *CSS Menus* Action. See [Chapter 11: Navigation menus](#).

Exhibeo Action

Exhibeo galleries can be re-exported as Xway galleries from Exhibeo. These can be imported as components. See [Chapter 14: Components](#).

Style

Xway should preserve most of the style information that is in Freeway documents. This includes most text styles, along with link styles, most "tag

styles”, and various box properties (backgrounds, borders, padding, margins, etc.)

If you have used graphic text within Freeway, this will be replaced by HTML text using the same styles that Freeway would use if you converted it to HTML text within Freeway.

One reason for using graphic text within Freeway is that Freeway offers a greater degree of typographical choice for graphic text compared with HTML text. However, Xway offers more typographical choice than Freeway did for HTML text. It lists a greater number of (cross-platform) fonts in its font menus; you can add web fonts in the **Fonts** view; and Xway provides a greater number of typographical options, including font weight (limited to bold or not bold in Freeway).

Layout

Freeway was originally designed to create table layouts, although later versions of Freeway Pro added support for CSS layouts. Table layout uses invisible tables to position items on a web page, but was deprecated in favor of CSS layout many years ago. Table layouts are more or less inflexible, and are unsuitable for modern flexible websites. An important goal in modern web design is to create flexible websites that can be viewed from phones and tablets as well as from desktop browsers. Today, most people browse websites from mobile devices rather than desktop computers. If you have a Freeway website that uses table layout, Xway will convert it to use inflow CSS layout. If you have a Freeway Pro website that uses CSS layout, Xway should be able to preserve most of the original layout.

Table layout

Xway converts table-layout boxes into flexible inflow boxes. These are sorted according to their position on a page (boxes that are nearer the top or left of a Freeway page come before boxes that are nearer the bottom or right). If you need to reorder some of the boxes, you can do that by dragging them within the **Page** view.

Alternatively, you may find it better to create a new layout, and copy your existing content into this. We recommend that you use a master page to create

your basic layout, and divide it into three top-level sections: a header section containing content that should appear on all pages, followed by a main section containing content that is unique to each page, followed by a footer section containing content that will appear on all pages. The introductory *Xway Tutorial* (which is available from our website) provides step-by-step instructions for doing this. See [Tutorials](#) (page 24).

If you have a navigation bar in your Freeway website, we recommend replacing this with an Xway menu. This is displayed as a navigation bar on wider screens, and replaced with a hamburger menu on narrower screens. The *Xway Menu Tutorial* (on our website) provides a step-by-step guide to using menus.

One of the restrictions in creating flexible layouts is that it's not possible to place boxes anywhere on a page, as you can with table layouts. But it is still possible to position boxes so that they appear next to each other on wider screens, and reflow to a single column on narrow screens. The *Xway Flexbox Tutorial* (also on our website) shows how to do this.

Note: Be careful using absolute-positioned items ("layers" in Freeway terminology). These might seem like a natural replacement for table-layout boxes, because they can be positioned anywhere on a page. However, the basic problem with using absolute-positioned items is that they are positioned independently of other items (apart from their parent items), so they are relatively inflexible. Even table-positioned items have a degree of vertical flexibility that absolute-positioned items don't have. There are times when absolute-positioned items are useful, but they are best regarded as an advanced layout technique. The way to create a flexible layout, in Freeway or Xway, is to use inflow (relative-positioned) boxes.

CSS layout

If you have a Freeway Pro document that uses CSS layout, Xway should preserve most of the existing layout. However, it's possible that the Freeway document uses float layout (along with clearfix hacks) to arrange boxes next to each other. Xway does not support float layouts, but it supports modern flexbox layouts that can be used for the same purpose and with greater flexibility. The *Xway Flexbox Tutorial* (on our website) provides a step-by-step guide to flex layouts. See [Tutorials](#) (page 24).

To convert a float layout into a flex layout, select the parent box (the box containing the boxes that were originally floated) and check the **Flex Container** checkbox in the **Style** section of the **Box Inspector**. Xway will display a **Flex Container** section immediately below the **Style** section. You should probably choose **Wrap** from the **Wrap** popup (which otherwise defaults to **Don't Wrap**), so that boxes will wrap to fit on smaller screens. You may also want to change some of the properties of the flex items (the boxes that are within the flex container). If the flex container is currently selected, you can select items within it by choosing **Select First Child** followed by **Select All** from the **Edit** menu. Xway will now display a **Flex Item** section, where you can change properties for flex items: you could start by choosing **Auto** from the **Flex** popup—this will allow items to grow and shrink, according to how much space is available. For more information on flex layouts, see [Chapter 16: Flexbox](#) along with the *Xway Flexbox Tutorial*.

You may also have used floated graphics (as opposed to floated container boxes) in a Freeway document. This is not yet directly supported by Xway, but you can use an extended property to float graphics (and other content boxes) when they are displayed in browsers: see [Floated boxes](#) (page 156). It's not recommended that you do this to create more complex float layouts. CSS rules for floated boxes are complicated, and Freeway float layouts use *Clearfix* Actions to apply a hack that prevents the layout from collapsing.

Document problems

Freeway documents may contain deeply nested spans, which can make it impossible to reopen an imported document after it has been saved. You can fix this by choosing **Check Document** from the **File** menu. See [Fixing document problems](#) (page 29).

Appendix 4: Importing other websites

If you have a website that was not created by Freeway, the easiest way to import it is to start by creating a flexible design, which you can fill with content that is copied across from a web browser. If you have not already done so, we recommend that you work through the Xway tutorial on our website (choose **Xway Resources** from Xway's **Help** menu and click on **Download the Xway tutorial**). This provides step-by-step instructions for creating a flexible website. You can use this as a starting point for your own website.

Once you have the basic design, you can fill this with content from your existing website. Text and graphics can be copied and pasted from a web browser. Graphics can also be reimported, or reattached to their original files after they have been copied.

If you need help or advice, you can ask questions on our discussion forum, which you can get to by choosing **Support and Community** from Xway's **Help** menu.