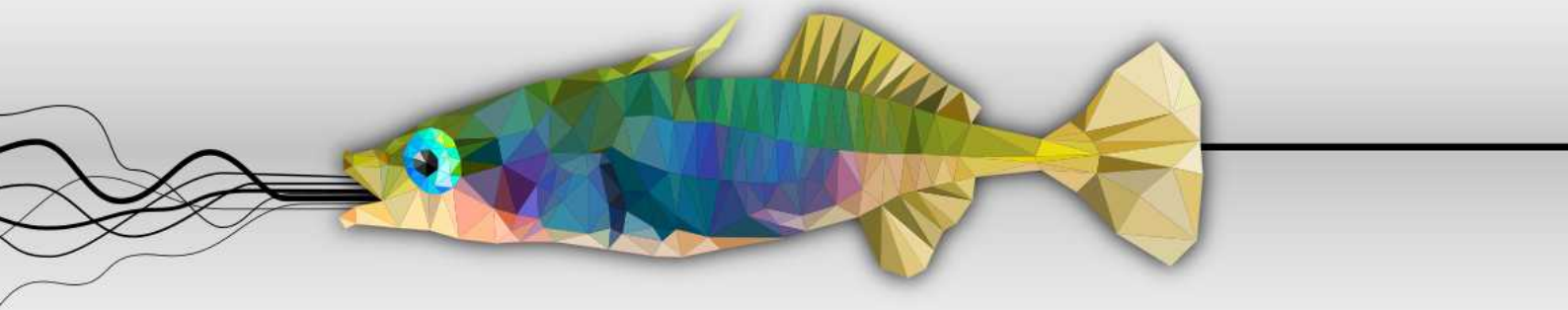
THE BOOK OF

TIDDLYWIKI

ADVANCED CUSTOMIZATION

LUIS J. GONZÁLEZ CABALLERO

Your messy thoughts. Organized.



tiddlywiki.com

your personal wiki — a single HTML file

laptop, mobile, tablet — offline or in the cloud

own your data 100% — open source and free

Advanced Customization

Luis Javier González Caballero
Riz - google groups

October 11, 2019

About the writers

Luis Javier González Caballero is an IT Technitian with extensive experience in user support. He has done some programming works mainly in Python. He is an Industrial Technician Engineer from the https://www.unileon.es, Spain. and a Computer Engineer from the https://www.uned.es in Spain too.

He is an active person with a great capacity for learning, which he is involved.

Apart from his professional career he collaborates with numerous non-profit organizations and free projects and is an animal lover. He lives in León, a small town in northwestern Spain with his family.

@kewapo@gmail.com

Contents

1 Introduction **9**
- 1.1 Key points . . . 9
- 1.2 What is tiddlywiki . . . 10
- 1.3 Starting with tiddlywiki . . . 11
- 1.4 Reasons to use tiddlywiki . . . 12
- 1.5 Elements of TW . . . 12
  - 1.5.1 The screen . . . 12
  - 1.5.2 Tiddlers . . . 12
  - 1.5.3 The Navigation History . . . 14
  - 1.5.4 Tags . . . 14
  - 1.5.5 Fields . . . 14
  - 1.5.6 Text format . . . 14
  - 1.5.7 Transclusion . . . 14
  - 1.5.8 Filters . . . 15
  - 1.5.9 Macros and widgets . . . 15
  - 1.5.10 Mechanism . . . 15

2 Components of the tiddlywiki screen **17**
- 2.1 Key points . . . 17
- 2.2 The TW whole screen . . . 18
  - 2.2.1 The story river . . . 19
  - 2.2.2 The right sidebars . . . 19
  - 2.2.3 The right and left topbars . . . 19
  - 2.2.4 Alerts . . . 19
- 2.3 Drawing its interface . . . 19

3 Loading tiddlywiki in the browser **21**
- 3.1 Architecture . . . 21
- 3.2 Loading phases . . . 21
- 3.3 Tiddlers as Basic Coding Elements . . . 21
- 3.4 Rendering wikitext . . . 21

4 Customize the TW screen **23**
- 4.1 Showing and hiding content . . . 23
- 4.2 Templates . . . 23
  - 4.2.1 Main system templates . . . 23
  - 4.2.2 How to create templates . . . 23
- 4.3 Using CSS in TW . . . 23

5 Inside a tiddler **25**
- 5.1 Types of tiddlers . . . 25

5.2 Normal tiddler . . . 25
5.2.1 Formatting text . . . 25
5.2.2 Linking content . . . 25
5.2.3 Basic transclusion . . . 25
5.2.4 Showing external content . . . 25
5.3 Adding macros and widgets . . . 25
5.4 CSS tiddlers . . . 25
5.5 Alert tiddlers . . . 25
5.6 Tag tiddlers . . . 25
5.7 Data tiddlers . . . 26
5.8 Macro tiddlers . . . 26

6 The filter notation **27**
6.1 The filter basic step . . . 27
6.2 Using filter operators . . . 27
6.3 Combining filter steps . . . 27
6.4 Regular expressions . . . 27
6.5 Filter uses . . . 27
6.6 Examples . . . 27

7 The behavior of tiddlywiki **29**
7.1 Creating microcontent . . . 29
7.2 Organizing microcontent with links . . . 29
7.3 Organizing tiddlers with tags . . . 29
7.4 Personalize behavior with macros and widgets . . . 29

8 Macros **31**
8.1 Basic macros included . . . 31
8.2 Writing your own macros . . . 31
8.3 Using macros . . . 31

9 Widgets **33**
9.1 Basic widgets included . . . 33
9.2 Writting your own widgets . . . 33
9.3 Using widgets . . . 33

10 The scrippting business **35**
10.1 List scrippting . . . 35
10.2 Interface scripting . . . 35
10.3 Data tiddlers scripting . . . 35
10.4 Template scripting . . . 35
10.5 Tiddlers scripting . . . 35

11 Recipe book **37**
11.1 Personal todo-list . . . 37
11.2 Writting stories . . . 37
11.3 Image gallery . . . 37
11.4 Lesson planner . . . 37
11.5 Simple game . . . 37

12 Languages **39**
12.1 Tiddlywiki languages 39
12.2 Writing international wikis 39

13 Plugins **41**
13.1 Extending tiddlywiki functionality 41
13.2 Creating plugins 41
13.3 Where we can find plugins 41

14 The people. The project **43**

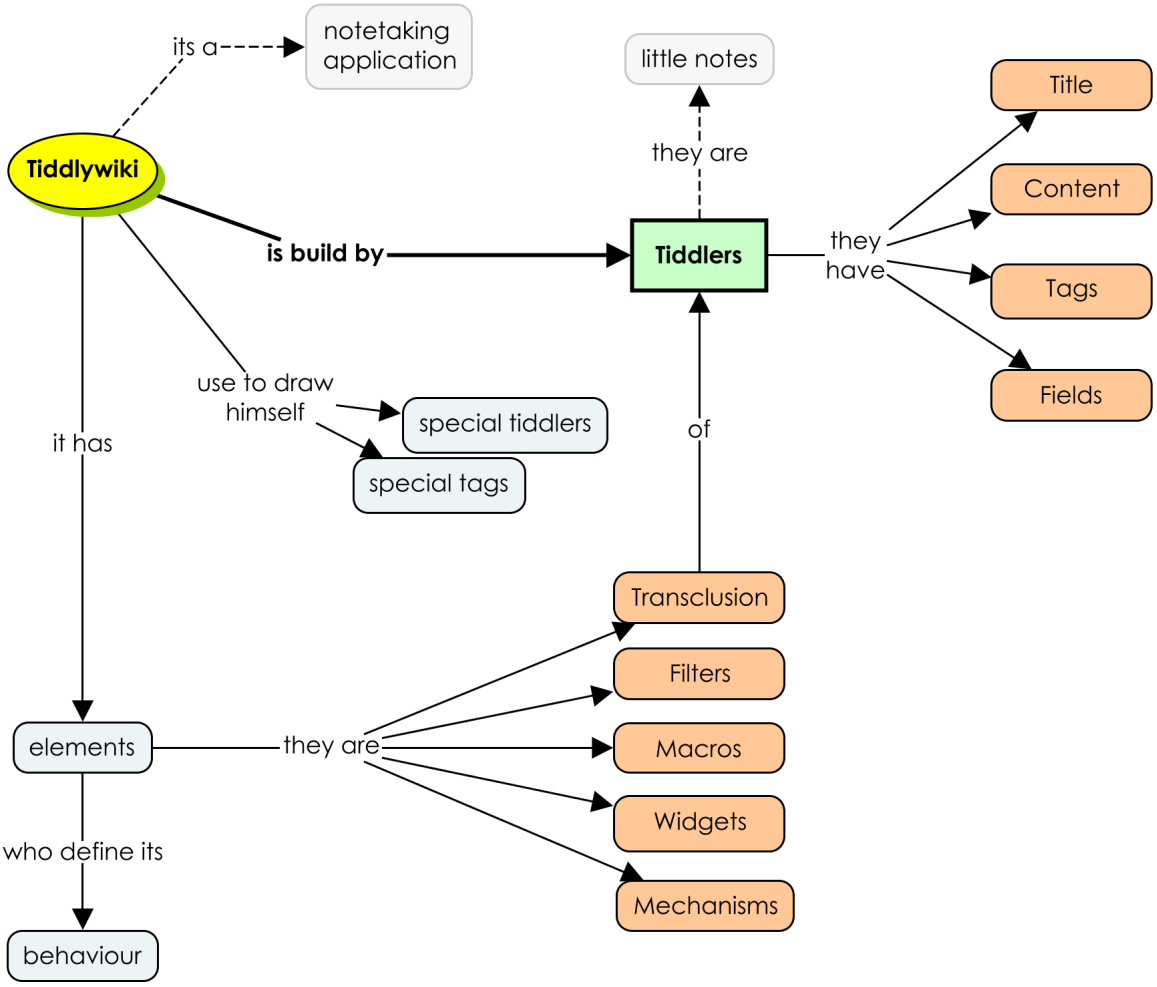
1 Introduction

1.1 Key points

- Tiddlywiki is more than a note-taking application.
- It is an advanced way of organizing your information.
- All notes you will add to it are called tiddlers.
- You can download an empty wiki from its web site.
- It is portable and multi platform.
- To add format to your text inside the tiddlers you use format characters: //text// for italics, ___text___ for underline, [[Tiddler]] for links etc.
- It use tags to organize, classify etc the tiddlers.
- It use fields to add extra information to the tiddlers. For example the created date field, the modified date field etc.
- You can include the information of a tiddler inside other tiddler without writing twice. This is called Transclusion.
- Tiddlywiki uses Filters to get a group of tiddlers. Filters are written in a little language inside tiddlywiki. For example, to get all tiddlers tagged with the “Person” tag you write {{{ [tag[Person]] }}}.
- You can add code to your wiki in Macros and Widgets. This is used to personalize the wiki.

1.2 What is tiddlywiki

Figure 1.1: What is Tiddlywiki

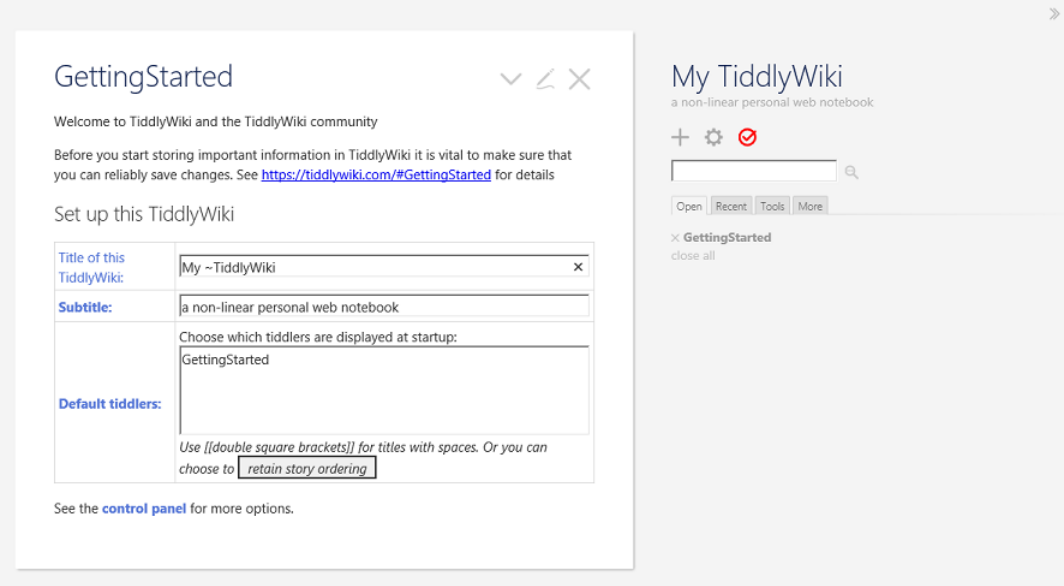


TiddlyWiki is a personal and a non-linear notebook for organizing and sharing complex information. It is an open-source single page application wiki in the form of a single HTML file that includes all javascript code, the CSS format and the content. It is designed to be easy to customize and re-shape depending on application. It facilitates re-use of content by dividing it into small pieces called Tiddlers. It is not an application but a large html page that runs in almost all web browsers so it is very portable: you can use it in a USB stick, in a phone or tablet or as a web page in some internet servers. Tiddlywiki is made of tiddlers: little text areas or notes with a title and a content. You can add all the tiddlers you want and each of them will contain certain information.

It was created by the British software developer Jeremy Ruston in 2004. Tiddlywiki is free and open source software and is distributed under the terms of the BSD license.

Tiddlywiki introduces the concept of microcontent: the smallest structured and addressable piece of information, the smallest semantically meaningful units. This small piece of information is called tiddler. The purpose of this tiddlers is recording and organizing information is so that it can be used as many times as necessary.

Figure 1.2: The first run of Tiddlywiki



You can find the basic information of Tiddlywiki in the web site: https://tiddlywiki.com/. I recommend you take a look.

1.3 Starting with tiddlywiki

The first step will be download an empty wiki page to our computer:

1. Go to https://tiddlywiki.com/.
2. Look for the tiddler “GettingStarted”
3. Click on the red button, “Download Empty”
4. Save the empty tiddlywiki in your computer.

Once you have the file you can open it with the browser (best with Firefox or Chrome). You will see the page of the Figure 1.2. Assign a title and a subtitle to your wiki. You will notice that the tick icon above the subtitle change to red.

This shows us an important thing: as an html web page, the TW file can’t save by itself. You musts save them by hand if you don’t want to loose the data. Click in this red icon and save the file in the same location. The next time you open the empty wiki in the browser the title and subtitle will have changed. Other operations you can do is to create an initial tiddler and change the “Default tiddlers” text area to the title of this first tiddler. To create tiddlers you will click on the "plus" icon under the subtitle.

The First Rule of using Tiddlywiki: backup your wiki file regularly retaining some backward copies.

1.4 Reasons to use tiddlywiki

You have powerful reasons to use tiddlywiki:

- You can use them without installing any software.
- It is multiplaform: use your wiki in your tablet, mac, linux, windows or phone systems.
- It is portable: you can put in a USB stick, copy to your computer or upload to many internet servers.
- Its unlinear approach allows you to use the information in new and helpfull ways.
- You can organize your information and knowledge your way.
- You can change the appearance and behavior of your wiki and adapt them to your preferences.
- Tiddlywiki promote information sharing.

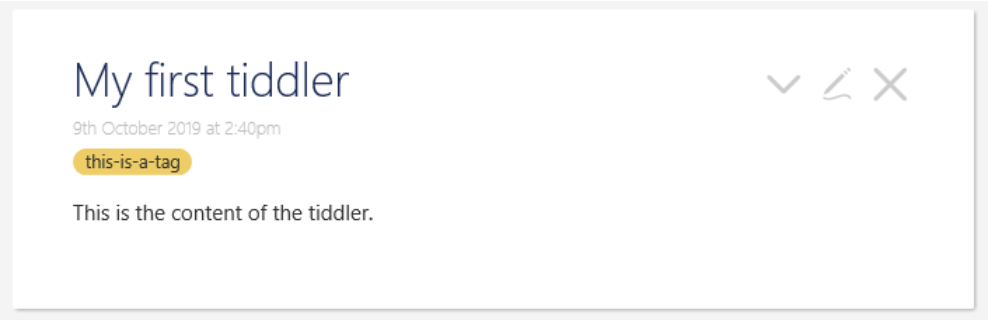
1.5 Elements of TW

1.5.1 The screen

When you open a Tiddlywiki file you can see a left size with all open tiddlers and a right side with the title, buttons, and menus.

1.5.2 Tiddlers

Figure 1.3: A tiddler



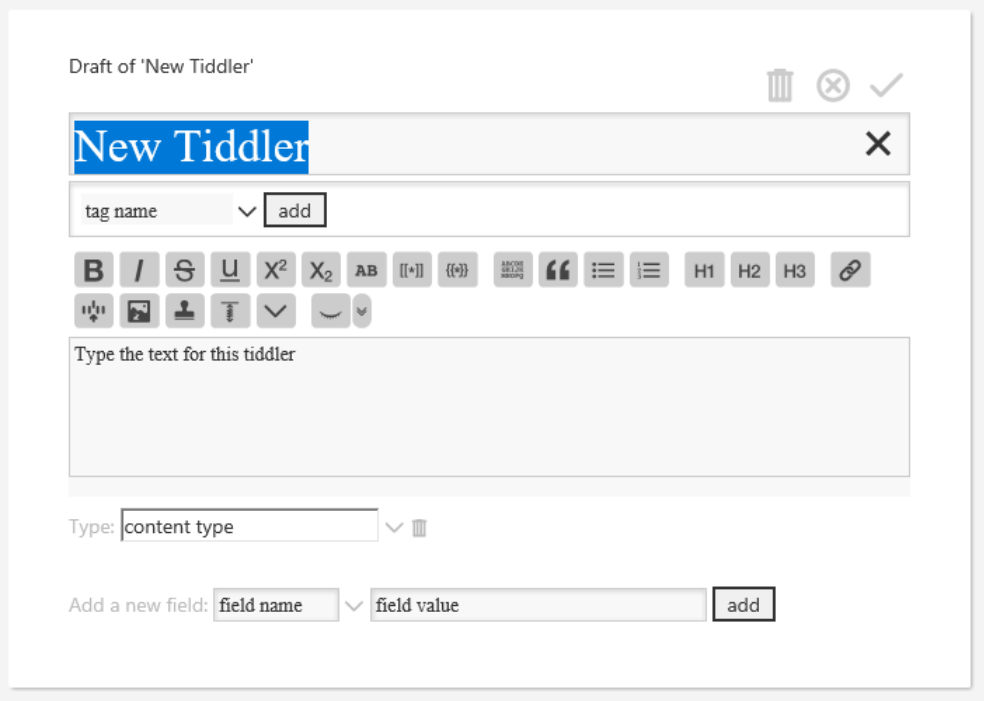
All notes you can add to Tiddlywiki are written in Tiddlers. It consist of a Title on the top, the tags and its content. A Tiddler is the basic element of Tiddliwiki. All things inside TW are made of tiddlers. The GettinStarted page you can see is a tiddler. The right menus too.

The most important thing in a tiddler is its title: this will be unique. In Figure 1.3 you can see the first tiddler:

- Buttons to edit and close the tiddler.
- Title: “My first tiddler”
- The field: created date.
- Tags: only one: “this-is-a-tag”. You can add as many tags as you want.
- Content: “This is the content of the tiddler”.

When you click the “plus” icon at the top you can see a tiddler in edition mode:

Figure 1.4: Creating a tiddler



- Buttons to delete, discard and save the tiddler
- Title at the top: “New Tiddler”
- Tag zone
- The format toolbar
- The content of the tiddler
- The type of the tiddler
- The fields zone. There are predefined fields but you can add your own fields.

If you close the tiddler it disappears from the screen. You can search it with the search bar, under the save button or choosing in the right menu More / All.

1.5.3 The Navigation History

The left side is called the Navigation History and shows all open tiddlers.

A typical wiki contains hundreds or thousands of tiddlers, some of them open in the left side and others closed stored in the file. You can search the closed tiddlers with the search bar or with the menus.

1.5.4 Tags

Tagging is a way of organizing tiddlers into categories. For example, if you had tiddlers representing various individuals, you could tag them as friend, family, colleague etc to indicate these people's relationships to you. By tagging your tiddlers, you can view, navigate and organize your information.

1.5.5 Fields

A tiddler has field. There are system field like the created and modified date but you can add your own ones.

1.5.6 Text format

The formatted text inside a tiddlerr is called "Wikitext". The best way of learing Wikitext is playing with the toolbar above the tiddler in edition mode. For example, if you want some words to be italiced and click in the italic icon of the tool bar while editing a tiddler, Tiddlywiki will add two slashes around the words: //some words//. WikiText is a concise, expressive way of typing a wide range of text formatting, hypertext and interactive features. It allows you to focus on writing without a complex user interface getting in the way. It is designed to be familiar for users of MarkDown, but with more of a focus on linking and the interactive features.

Other example: you can make a link of a tiddler inside other tiddler writting [[Tiddler Title Linked]].

1.5.7 Transclusion

Transclusion is the process of referencing one tiddler "A" from another tiddler "B" such that the content of "A" appears to be a part of "B". It avoid Avoid having duplicate information.

- To show the information of a tiddler inside other, write {{Tiddler Title}}.
- To show the content of a field write {{Tiddler Tittle !! field name}}.
- to show the content of a field in the same tiddler write: {{!! field name}}

1.5.8 Filters

You can think of TiddlyWiki as a database in which the records are tiddlers. A database typically provides a way of discovering which records match a given pattern, and in TiddlyWiki this is done with filters.

A filter is a concise notation for selecting a particular set of tiddlers. For example, to show the titles of all tiddlers tagged with the "learn" tag we can write {{{ [tag[learn]] }}}. The [tag[learn]] item is the filter and the brackets the way to add the links.

1.5.9 Macros and widgets

Tiddlywiki is highly customizable. It use macros and widgets to personalize its appearance.

A macro is a named snippet of text. When you use it, Tiddlywiki shows its content.

A widget is a piece of code to perform some actions.

1.5.10 Mechanism

All elements of tiddlywiki fit together through mechanism. For example, the HistoryMechanism keeps track of a list of tiddlers comprising the navigation history. The StartupMechanism runs the installed startup modules at the end of the boot process.

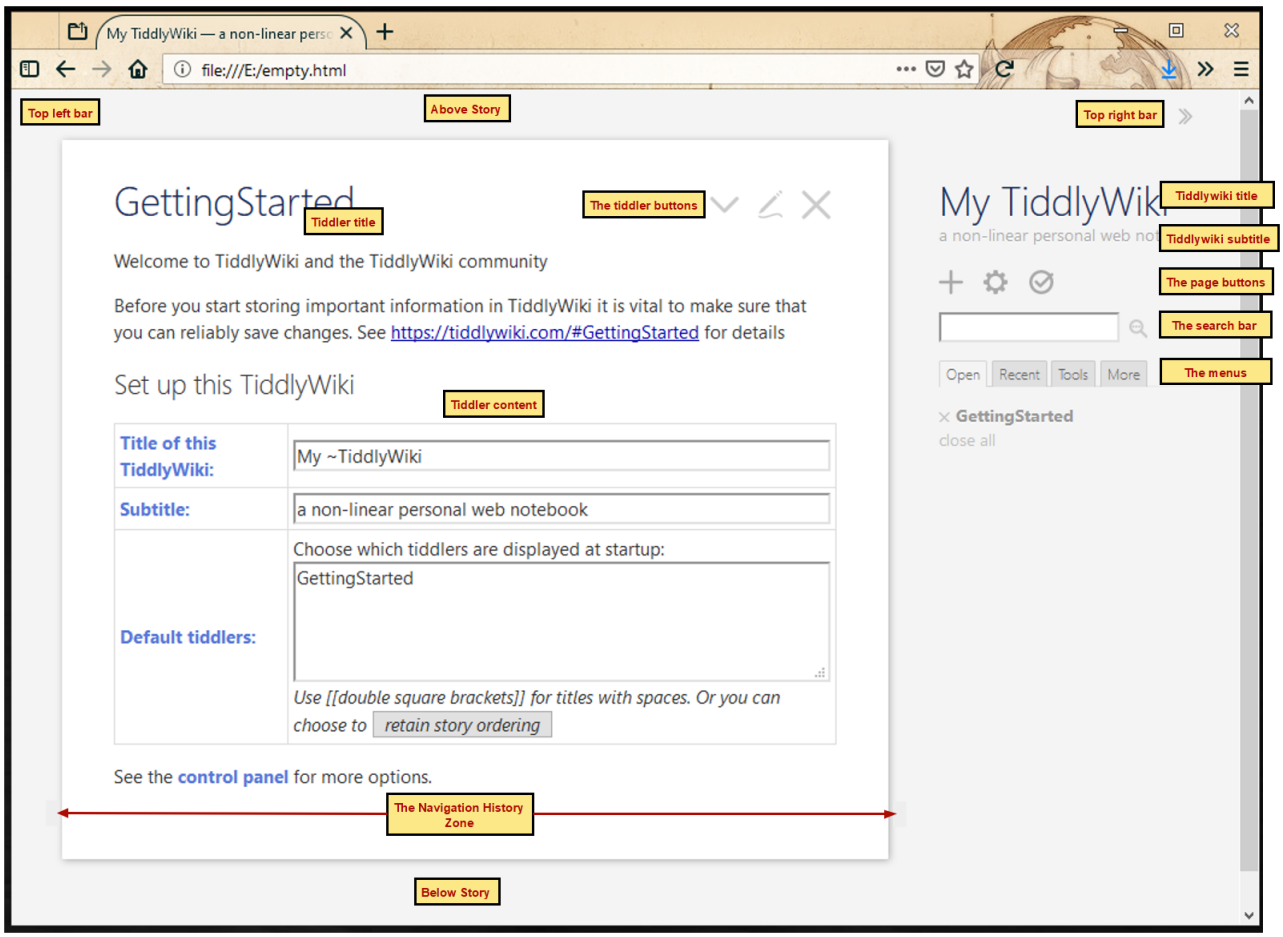
2 Components of the tiddlywiki screen

2.1 Key points

- Tiddlywiki page is divided in two main sides. The left is the Story River. The right, the sidebars
- In the left side appears the tiddlers you open.
- The right side shows the title, subtitle, buttons and the menus.
- Tiddlywiki uses special tiddlers and special tags to configure its appearance.

2.2 The TW whole screen

Figure 2.1: The Tiddlywiki page



In the Figure 2.1 we can see the Tiddlywiki elements. The most important things are the Navigation History on the left and the right elements. The tiddlers that we open will appear in the navigation story on the left. With he right menus we can find all the tiddlers of the file.

These are the elements that we can see in the Tiddlywiki page. But in order to personalize our wiki we must go deeper. You have to know that all this elements are tiddlers: the title and subtitle of your Tiddlywiki are tiddlers. The right menus too. And the search text box is a tiddler too. Even the buttons are tiddlers. The top right and left bars, the Above story, the Below story, all are tiddlers, **system** and **shadow** tiddlers.

Inside Tiddlywiki, all is a tiddler. And you can search and open them. For example if you look for the Subtitle in the search bar in advanced mode (click in the Advanced search icon on the right of the search bar) you will find a tiddler called $:/SiteSubtitle. Its a shadow tiddler. If you change its content, the Tiddlywiki subtitle will change. And if you look for the save button you will find the tiddler called $:/core/ui/Buttons/save with the code of the button.

Figure 2.2: The tags of Tiddlywiki places

2.2.1 The story river

This place of the Tiddlywiki page is where all tiddlers you will open appear. You can configure the way Tiddlywiki will open them in the configuration tiddler (click the gearwheel icon on the right). At first all tiddlers opens each under the other but you can configure it so that only the active tiddler appears.

2.2.2 The right sidebars

The right place is where you can see the wiki title, subtitle, the page buttons, the search bar.... and under them the sidebars (the menus).

You can see 4 tabs: Open for the open tiddlers, Recent for the tiddlers you have opened, Tools to customize and configure your wiki and More where you can find some utilities. Of course they are four tiddlers: $:/core/ui/SideBar/Open, $:/core/ui/SideBar/Recent, $:/core/ui/SideBar/Tools and $:/core/ui/SideBar/More. All of them has the tag: $:/tags/SideBar. So if you want to include your own tab create a tiddler and add to them this tag.

This is an important question about Tiddlywiki: The tiddlers that make up the screen are chosen with its tags. For example, above we have seen that if you put the tag $:/tags/SideBar to a tiddler it appears on the left side. There are many tags for all places of the screen. You can see then in Figure 2.2

2.2.3 The right and left topbars

2.2.4 Alerts

2.3 Drawing its interface

We know all are tiddlers but how Tiddlywiki draws its interface?

3 Loading tiddlywiki in the browser

In this section we describe the loading of TW simplified for a non-programmer to understand: from the fist javascript function to the last rendering wikitext to html page elements.

3.1 Architecture

1. The microkernel
2. Startup modules
3. Mechanisms
4. The outer layer: transclusion, widgets, wikitext...

3.2 Loading phases

1. The javascript main function.
2. Creating tiddler objects.
3. Construct the wiki store.
4. Load modules
5. Loading startup tiddlers

3.3 Tiddlers as Basic Coding Elements

3.4 Rendering wikitext

4 Customize the TW screen

4.1 Showing and hiding content

4.2 Templates

4.2.1 Main system templates

Pagetemplate, Viewtemplate, Edittemplate, Tagtemplate...

4.2.2 How to create templates

4.3 Using CSS in TW

5 Inside a tiddler

5.1 Types of tiddlers

Wikitext tiddlers, CSS tiddlers, Alert tiddler, Data tiddlers, Macro tiddlers, Tag tiddlers, ...

5.2 Normal tiddler

5.2.1 Formatting text

5.2.2 Linking content

5.2.3 Basic transclusion

5.2.4 Showing external content

as mime types (videos, images, pdfs), as html elements (<video controls...,)

5.3 Adding macros and widgets

Here you can find basic information. Advanced information in later chapters.

5.4 CSS tiddlers

Customizing the appearance of your wiki with CSS tiddlers.

5.5 Alert tiddlers

5.6 Tag tiddlers

A way of ranking tags. A possible use: sidebar index. The color and icon of a tag.

5.7 Data tiddlers

- JSON and Dictionary tiddlers.
- Refering the data.

5.8 Macro tiddlers

Wikitext macros and javascript macros.

6 The filter notation

6.1 The filter basic step

6.2 Using filter operators

6.3 Combining filter steps

- combining by OR
- combining by AND
- combining by NOT

6.4 Regular expressions

6.5 Filter uses

6.6 Examples

7 The behavior of tiddlywiki

7.1 Creating microcontent

7.2 Organizing microcontent with links

7.3 Organizing tiddlers with tags

7.4 Personalize behavior with macros and widgets

8 Macros

Customizing your tiddler functionality with macros.

8.1 Basic macros included

8.2 Writing your own macros

8.3 Using macros

9 Widgets

Customizing your tiddler functionality with widgets.

9.1 Basic widgets included

9.2 Writting your own widgets

This question is out of the goal of this book. We show how to add javascript code to your tiddler.

9.3 Using widgets

10 The scrippting business

Pieces of code.

10.1 List scrippting

Lists, nested lists, actions and buttons inside lists...

10.2 Interface scripting

How to use buttons, edittext, radiobuttons, checkboxes...

10.3 Data tiddlers scripting

How to use data tiddlers.

10.4 Template scripting

Revealing sections of tiddlywiki, state tiddlers...

10.5 Tiddlers scripting

Creating, removing and editing tiddlers with code, navigating with code...

11 Recipe book

In this section we will show master code pieces to various situations. Personal wikis with many uses.

Maybe the sections will be:

11.1 Personal todo-list

11.2 Writting stories

11.3 Image gallery

11.4 Lesson planner

11.5 Simple game

12 Languages

12.1 Tiddlywiki languages

12.2 Writing international wikis

13 Plugins

13.1 Extending tiddlywiki functionality

13.2 Creating plugins

13.3 Where we can find plugins

14 The people. The project

I want to add a chapter with all the people under this project. From Jeremy though the core developers to the wiki writers.

And the project, its philosophy and the future of tiddlywiki.