

# WanderLust – Shorthand



## VR Story Guide

To enhance a Shorthand story to VR, extract WanderLustShorthandVRFunction.zip into your story folder, and then run `js_vr/masterFunction.js`.

### Running the story

The story can now be run locally by opening `index.html`. The normal story should appear here, but a new “Enter VR” button should have appeared at the top right. Clicking on this will take you to an guide page to navigate the VR story, and the button at the bottom will take you to the actual VR story. While this will not load any images due to the nature of the local server, once the website is hosted properly all media will load correctly. To view text in this moment, click the “vr” button at the bottom right of the screen.

### The Future of this project:

While “`masterFunction.js`” runs all necessary sub-scripts and creates the additional folders, it is still an extra step for the Author to run manually. Which is why, if this project were to be pursued and implemented into the live Shorthand system, these functions would be attached to the “publish” function. This means that when the author is finished developing their story and decide to publish their story, it would generate all the necessary story files AND WanderLust’s VR functions and resources, automatically running this js file to create a VR enhanced story with minimum effort or additional steps from the author.

# Project Developer Guide

## ROOT DIRECTORY:

/index.html

- Index.html is the primary story html file, produced from Shorthand's "Publish and Download" story function. This file is the core story, customized and published by the author, to be viewed on every web browser

/story.json

- The core Story file, describing the full contents, effects and placement of all story elements in the standard browser. Extracted for usage in VR story.

/index\_vr.html

- Created by masterFunction.js. This is the primary VR story html file, containing the A-Frame adapted story based on index.html, for a full VR experience.

/indexVRGuide.html

- Intermittent VR usage warning and guide page, displayed to the reader when they attempt to navigate from the core story to the VR story.

## JS Files:

/js\_vr/ExtractStory.js

- Navigates through story.json and extracts all relevant story elements which can be used in VR, including the following:
  - Story Text, Images, Font-Sizes, Font-Formatting, Videos, Audio, Objects

/js\_vr/ExtractMedia.js

- Navigates through the /assets/ directory folder to save the path of all assets to be used

/js\_vr/index\_vr.html

- The template VR Story html file which is copied by masterFunction into the root directory

/js\_vr/indexVRGuide.html

- The template Guide html file which is copied by masterFunction into the root directory

/js\_vr/masterFunction.js

- The Master Function, which copies and runs all necessary scripts to create the functional VR story in the same directory as the primary story.
- Runs scriptTemplate, creating storyFunctions.js, and then runs ExtractMedia.js and ExtractStory.js, which both add story functions and variables to storyFunctions.js

/js\_vr/scriptTemplate.js

- The template javascript file, to be copied by masterFunction

/js\_vr/storyFunctions.js

- The javascript file which contains all variables and functions, run by index\_vr.html

## VR Resources:

- Water (/app/, /image-dir/)
- Particles (/dist/)

Plus other resources and documenting files as per the standard Shorthand story publishing.

## storyFunctions.js Rundown:

- Declares story-wide variables which will be Utilized and updated as the story is navigated, ie: Array of the story paragraphs, image directories, integer for the current page number, object array for the text and image objects
- Document Listeners (Keypress events)
  - Key “1”/”3” -> Skips to the Previous/Next story section
  - Key “q”/”e” -> Decreases/Increases scrolling speed
  - Keys “wasd” -> spatial navigation around the environment/story
  - Key “r” -> Restarts the VR story
- Document Listener (AFrame component)
  - Thumbstick moving to increase/decrease scrolling speed, or change page
- Imports Text formatting (bold, italic, italicBold, light, regular) from WanderLust’s github repo, for use through the story.
- scroll()
  - Constantly increments the current text position, scrolling through the text
- wrapAround()
  - accepts arguments to adjust a variable count by a value, and if it exceeds the minimum/maximum value then it resets it to the maximum/minimum
- newSection()
  - When the page changes to a newSection, resets all the respective models/media/images/backgrounds
- setOpacity()
  - Sets the opacity of selected objects on a frequent interval as the story runs, dependent on the current scrolling height of the text
- importAllText()
  - Retrieves all text paragraphs (uses retrieveStoryText(), see below) from the json, all image references from the json, and all image directories from the file repository, assigning each to their respective array in the script
- changeSky()
  - Fades out the sky, and sets timer for sky to fade back in
- setSkyFadeIn()
  - Changes the sky asset, and adds fade in animation
- createImages() / createAudio() / createObjects()
  - For all Image, Audio and Object references in the current section, creates the respective A-Frame components
- createText()
  - For each paragraph in the current section, creates a new text element
  - Each text element has it’s own height and opacity, changing as it scrolls
- refreshMedia()
  - Deletes all media, objects and text
  - Sets timer to create next section’s media
- iniParagraphObejcts()
  - assigns the html text paragraph objects to array variables for future use