

11 aug 2025

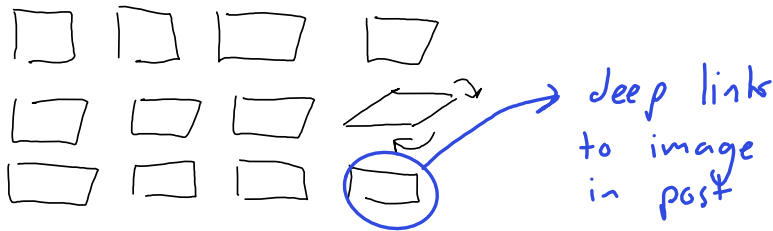
Willemstagram

→ "flip-flap display" by Solari di Udine

intro: encounter with creative customer, non-linear was missing "visual punch"

backdrop: flip-flap display on train station
various destinations
feels alive, always refreshing, new destinations
link to Solari di Udine "solari board" / wiki

idea



implementation: ThreeJS, short explainer (perspective)
earlier experience (link to 3D spot data post)
Custom image API using lemmid (link to work)
integrated on homepage narrative + deeplink
localisation
released under Affero GPL (source.willem.com)

Conclusion "is it fun?" yes. Different way to explore

Willemstagram

3D flip-flap photo display showing stories

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Last week I sat with a customer looking at the new willem.com homepage where I use a ~~textual~~ narrative to tell about the things I do. This customer is one of the best visionary creative thinkers, yet my text didn't seem to speak to him. Thinking about this I remembered an important psychology lesson from the University: I needed something different, something non-linear, this post is about delivering a visual punch!

Left versus Right Brain Thinking

One of the cool things of [my education] at the University of Amsterdam was that we got classes from different faculties, forming an interesting mix of interdisciplinary science. One classic book we discussed was "Mintzberg on Management" in which the author elaborates why different people prefer different things, the classic dichotomy often simplified as left versus right brain thinkers:

- ☞ The linear thinker (the left brain): This is the natural state for people that appreciate a logical narrative that builds from A to B to C. Typical persons like this are storytellers, architects and programmers.

☞ The non-linear thinker (the right brain): This is the state of people that don't follow a straight line. They scan for impressions, vibes and emotional takeaways. Typical persons like this are creative folks including artists and visionary thinkers.

My new willen.com homepage worked well for linear thinkers like me, the text based narrative suits the left-brain. But, my design lacked for people who go best on non-linear, vibefull impressions. I needed something that exposes the many visuals in a rich and dynamic way, alive and with a healthy dose of interactive fun.

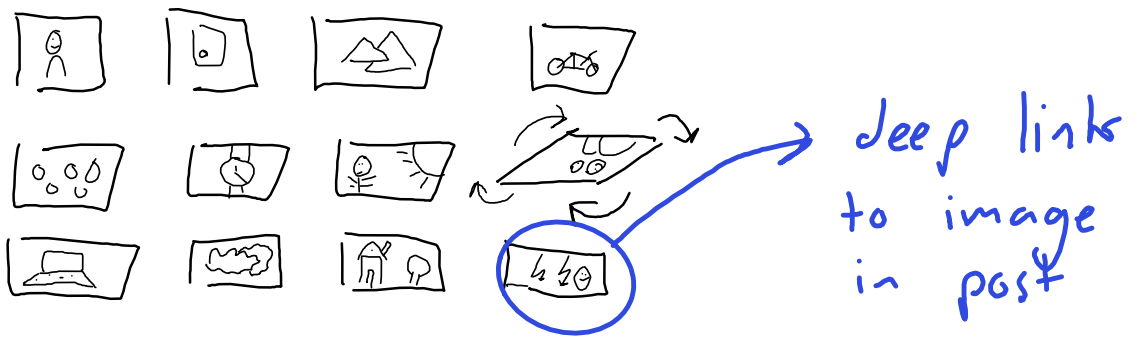
Solari board

Many moons ago I met my wife on Utrecht Central Station, right under the gigantic departure information board. The iconic $7 \times 4,20\text{M}$ blue info board, weighing around 3000 kilos, featured flip-flapping mechanical panels producing a recognisable sound you would hear every minute or so in the central hall of the station. This type of signage display is often called a "Solari Board", named after [Solari di Udine], the Italian company that produced these icons. The Utrecht station features digital info displays these days, but if you want you can still see it in [Het Spoorwegmuseum] (Dutch Railway Museum)

[image]

The big blue mechanical train departure info board from Utrecht Centraal (cc mauritsg)

As a metaphor aficionado (book tip: *Metaphors we live by*), I figured the Solari Board, with its "flip-flapping" would be a lovely way to allow visitors of willem.com to "depart" to various "destinations" (the stories) on the site. Instead of using text, I deliberately chose to use the photos and visuals inside the blog posts as gateways into the [insights]-section on willem.com. By randomly revealing new destinations this is perfectly non-linear and by making it interactive (clickable and touchable) it is more engaging than plain text. Every destination opens a "ticket" explaining a little bit of what it is you're looking at. If you like what you see you can hit the big button to open the story right at the position of the image, which could be halfway a blog post. Stories open in new browser windows enabling you to return to the station to find a new destination.



[image]

Visual Journal concept sketch: flip-flapping images deep linking to pages on willem.com like a mechanical Solari Board

Implementation: ThreeJS and custom image API

Earlier I experimented with the ThreeJS 3D graphics engine to visualise workout data. It is a library using the HTML5 standard 'canvas' element to output graphics generated utilising spatial computing, a fancy way to say it enables you to draw things on three dimensions (x, y, z) instead of two, hence its name. It provides camera, light and fog controls and it is designed to enable animations based on simulated position and rotation. It is pretty cool to play with and quite capable. See these earlier two posts on my experiments with ThreeJS:

[post 2025-03-10 2025-04-15]

The minimalist in me briefly considered going with CSS animations, transforms and transitions. But I figured the realistic perspective, where the outermost panels rotate more skewed, and the randomness in selecting new visuals would require me to use JavaScript anyway. To maximise its value I wanted to integrate it right on my homepage. But, loading a complete 3D engine is not something to consider lightly. To minimise its effects on the homepage's loading time I carefully designed the thing to be loaded asynchronously and entirely optional (for people with JS disabled).

[image]

Visual Journal, dubbed "Willemstagram", in action

To feed the "Visual Journal", I designed a custom API that serves highly optimised images scaled to 400×400 px. Each image has a localised title and a deeplink with an hashtag (slug) anchor, enabling the deep diving into stories. I rely on [my own lemmid platform] to provide me with the required infrastructure to pull this off. In the background an optimised 'NodeJS' service generates the images using 'imagemagick', 'jpegoptim' and 'pngquant'. You can check out the API yourself on willen.com/en/images.json outputting a JSON array like:

```
""  
[ sample array here ]  
""
```

To prevent the thing from being just a random link generator I deliberately put a little popup in it when you tap or click any visual. I utilise the image captions that my [lemmid content manager] maintains to reveal a bit of info enabling you to determine if you think it is worth opening the story.

[image]

The popup enables you to make a decision of diving into the story or to continue exploring other images.

Releasing the source code (AGPL)

While I am happy with how the Visual Journal works on my site, I strongly believe in sharing. Chances are you have an even better idea for some solaris flip-flapping. Therefore I release the entire thing as

free/libre software under the GNU Affero General Public License (AGPL). That means you can use, modify and distribute it yourself. Find the source code, readme and sample files at <https://source.willem.com/visual-journal/>

Conclusion

Judging by how it captivates my kids' curiosity, I am very happy with the visual journal, which I jokingly dubbed WILLEMSTAGRAM. But unlike Meta's Instagram, this only serves visuals to tell my stories and its source is libre. You can check it out on the homepage or by hitting the button below. What destination will you choose?

[action 1: Willemstagram] → willem.com/willemstagram.