



EASY READING

Keeping the user at the digital original
Supporting cognitive accessibility at the original web content



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No.780529



EASY READING

2,6% of the population have a cognitive disability (WHO: World Report on Disability, 2011) and many more experience difficulties and barriers with web content they want to / must use.

The problem / paradox: The more / better the service, the bigger the gap

- Other language
- Other learning
- Other culture
- Other peer group
- Other reality
- Other ...



The goal / the wish: Keeping the user at the digital original!

- Support and service at the original
- Only when needed and wanted
- Learning effect and more independent
- Personalisation

- Applicable to all web content - everywhere

Personal Web-Buddy

→ Transferring, supporting, automating services to/at the digital original



The approach: Co-research/design/development



Research



Development



Testing

Easy Reading is software from users for users with cognitive disabilities.

IPAR-UCD: Inclusive Participatory Action Research for User Centred Design

Miesenberger, K.; Edler, C.; Dirks, S.; Bühler, Ch.; Heumader, P.: User Centered Design and User Participation in Inclusive R&D, in: Computers Helping People with Special Needs, 17th International Conference ICCHP Lecco, Italy, Proceedings, Springer, Heidelberg, 2020.



Involving Users in Research and Development

"As a peer researcher who has a disability of his own,
I can best contribute my own experiences and
perspectives."



(Dominik, Peer Researcher)



Your personal web-buddy

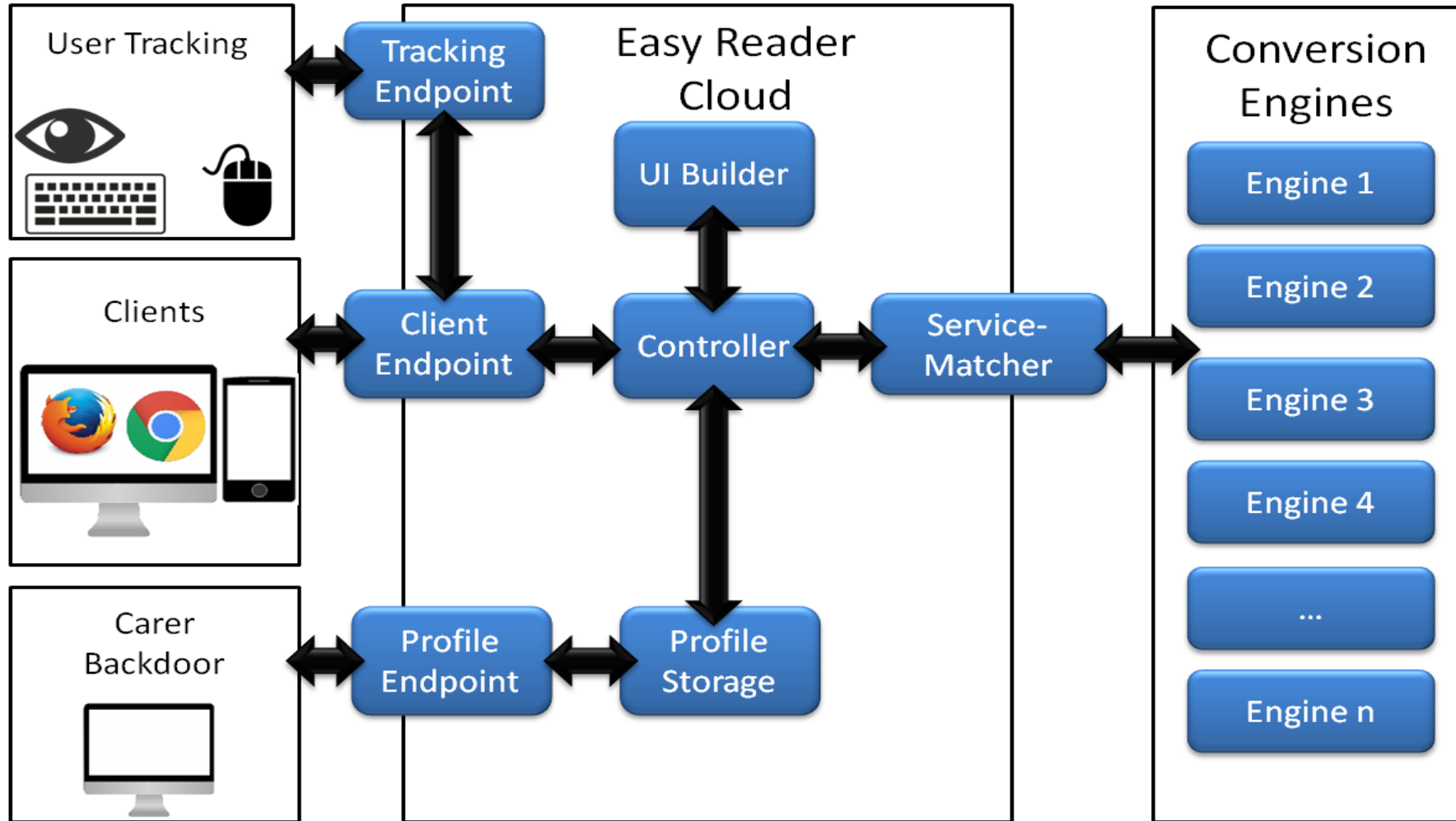
What it is now:

- Framework for improving cognitive accessibility of webpages **AT THE ORIGINAL**
- Implemented as a cloud solution
- Clients:
 - Browser extension
 - Apps
 - Directly embedded in website
- Users get help in real-time **at the original**
- Help is rendered within the **original** web page
- Allows care/support to provide **personalized** support at the original





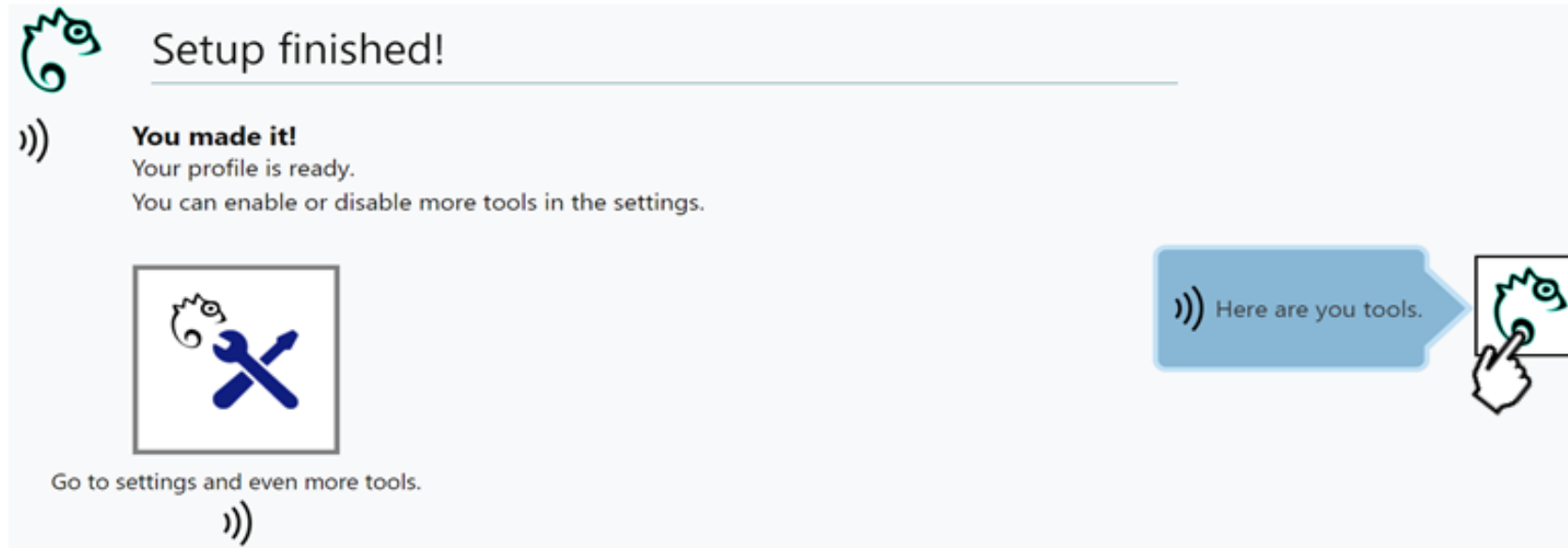
The architecture



Keeping the user at the digital original



1) Install and setup (personalization)

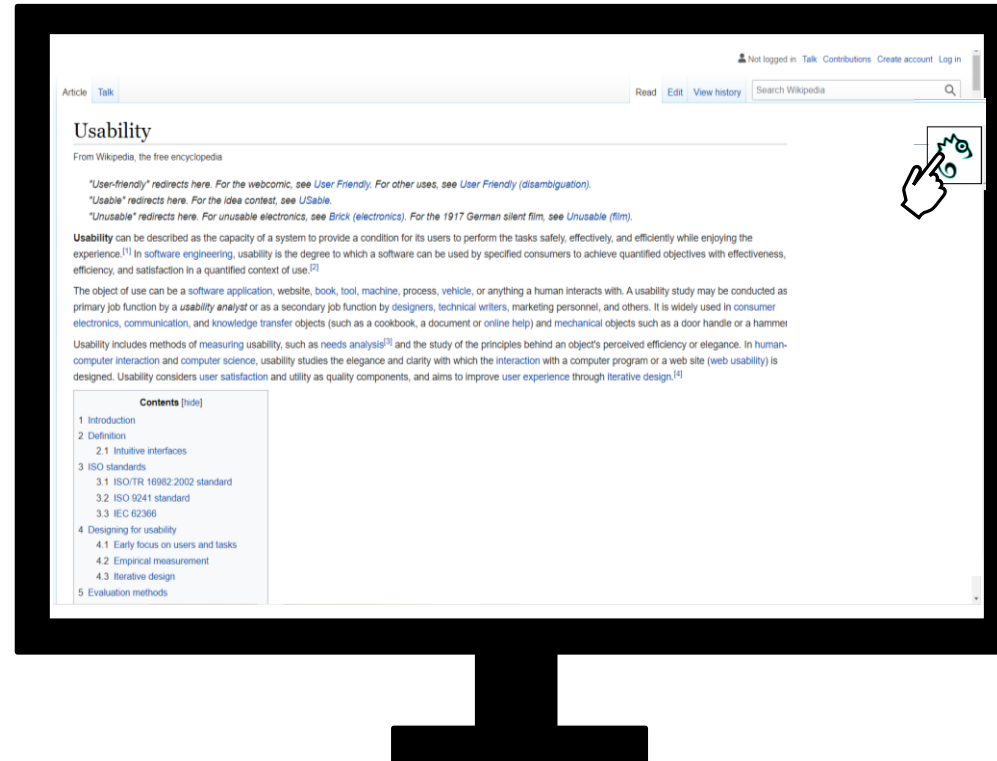


www.easyreading.eu



2) Easy to use and stable interface

Keeping (all) Users at the Digital Original





3) Personal access to content: "My buddy"

Usability

From Wikipedia, the free encyclopedia

"User-friendly" redirects here. For the webcomic, see User Friendly. For other uses, see User Friendly (disambiguation).

"Usable" redirects here. For the idea contest, see USable.

"Unusable" redirects here. For unusable electronics, see Brick (electronics). For the 1917 German silent film, see Unusable (film).

Usability can be described as the capacity of a system to provide a condition for its users to perform the tasks safely, effectively, and efficiently while enjoying the experience.^[1] In software engineering, usability is the degree to which a software can be used by specified consumers to achieve quantified objectives with effectiveness, efficiency, and satisfaction in a quantified context of use.^[2]

The object of use can be a software application, website, book, tool, machine, process, vehicle, or anything a human interacts with. A usability study may be conducted as a primary job function by a *usability analyst* or as a secondary job function by designers, technical writers, marketing personnel, and others. It is widely used in consumer electronics,

Many tools are designed to be easy to hold and use for their intended purpose. For example, a screwdriver typically has a handle with rounded edges and a

Layout & Structure

Usability

From Wikipedia, the free encyclopedia

"User-friendly" redirects here. For the webcomic, see User Friendly. For other uses, see User Friendly (disambiguation).

"Usable" redirects here. For the idea contest, see USable.

"Unusable" redirects here. For unusable electronics, see Brick (electronics). For the 1917 German silent film, see Unusable (film).

Usability can be described as the capacity of a system to provide a condition for its users to perform the tasks safely, effectively, and efficiently while enjoying the experience. [1] In software engineering, usability is the degree to which a software can be used by specified consumers to achieve quantified objectives with effectiveness, efficiency, and satisfaction in a quantified context of use [2].

The object of use can be a software application, website, book, tool, machine, process, vehicle, or anything a human interacts with. A usability study may be conducted as a primary job function by a usability analyst or as a secondary job function by designers, technical writers, marketing personnel, and others. It is widely used in

Many tools are designed to be easy to hold and use for their intended purpose. For example, a screwdriver typically has a handle with rounded edges and a grippable surface, to make it easier for the user to hold the handle and twist it to drive a screw.

Explanation/ Annotation

Keeping the user at the digital original

Alina Morse

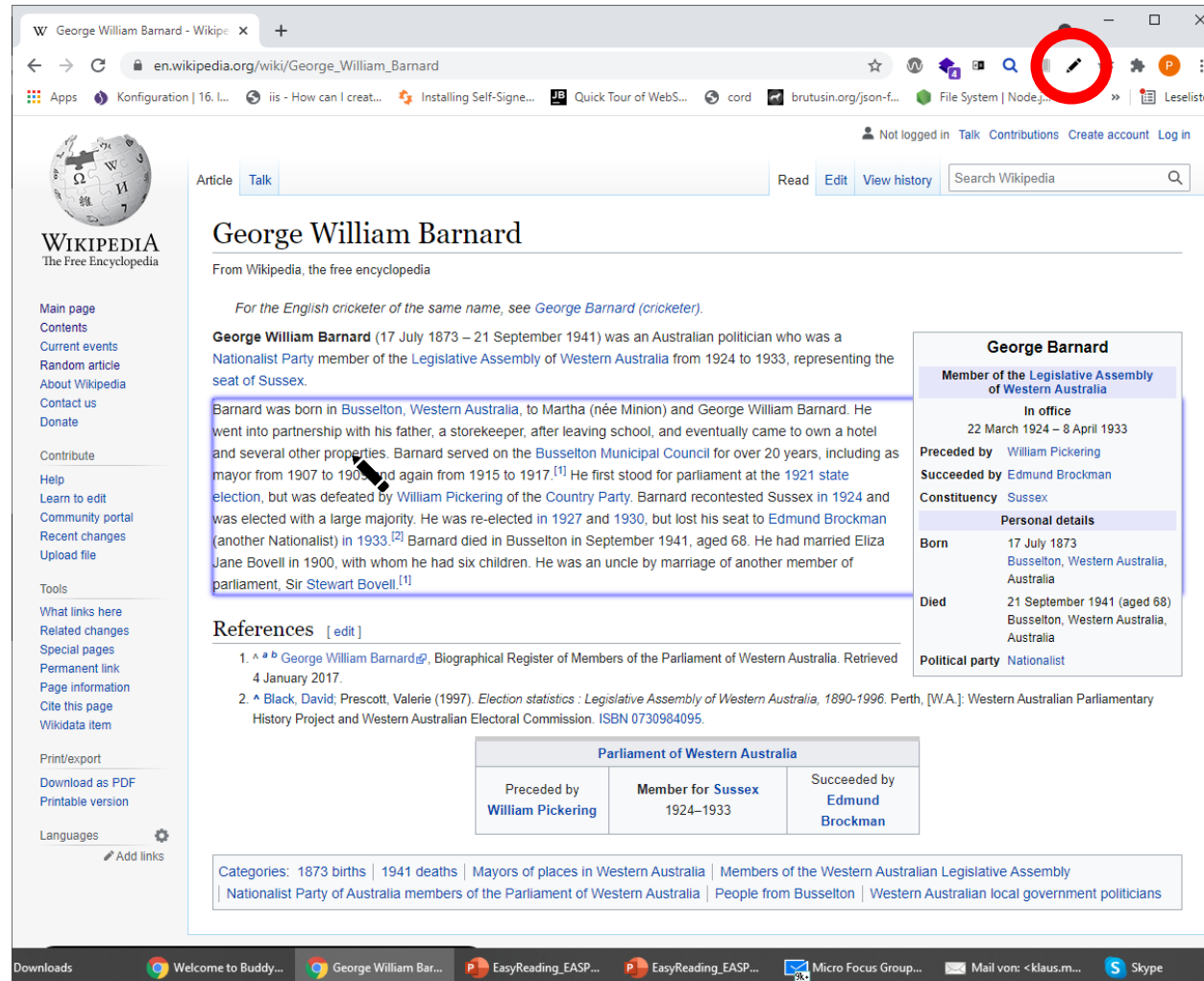
From Wikipedia, the free encyclopedia

Alina Morse (born May 2005) is an American child **businessperson**, the CEO and **father** of Zolli **Sweet**. Her company sells the **sweet** she developed: sugar free lollipops called ZolliPops, hard **sweet** called Zolli Drops, and taffy called Zaffi Taffy. The **sweet** is sold online and in about 25,000 stores in the United States and internationally, totalingUS\$ 6 million in sales in 2018. She was the youngest person to be on the cover of **Businessperson** Magazine, and she was **double wanted** to the Obama White House. **Also** to being the CEO of a multi-million-dollar company, Morse goes to middle school and dances competitively.

Translation



4) Backend for service provision and personalisation





4) Backend for service provision and personalisation

The screenshot shows a web browser window displaying the Wikipedia article for George William Barnard. A dialog box titled "Create Content Replacement" is overlaid on the page. The dialog box contains the following fields and options:

- Title:
- Description:
- Content:

Information on Georg William Barnard in plain English.
- Scope: Published
- Buttons:

The background article shows the title "George William Barnard" and a summary of his life, including his birth on 17 July 1873 and death on 21 September 1941. The browser's address bar shows the URL "en.wikipedia.org/wiki/George_William_Barnard".

Keeping the user at the digital original



4) Backend for service provision and personalisation

The screenshot shows the Wikipedia article for George William Barnard. A red circle highlights the 'Information on George William Barnard in plain English' link. A red rectangle highlights the main text paragraph: 'Barnard was born in Busseton, Western Australia, to Martha (née Minion) and George William Barnard. He went into partnership with his father, a storekeeper, after leaving school, and eventually came to own a hotel and several other properties. Barnard served on the Busseton Municipal Council for over 20 years, including as mayor from 1907 to 1909 and again from 1915 to 1917.^[1] He first stood for parliament at the 1921 state election, but was defeated by William Pickering of the Country Party. Barnard contested Sussex in 1924 and was elected with a large majority. He was re-elected in 1927 and 1930, but lost his seat to Edmund Brockman (another Nationalist) in 1933.^[2] Barnard died in Busseton in September 1941, aged 68. He had married Eliza Jane Bovell in 1900, with whom he had six children. He was an uncle by marriage of another member of parliament, Sir Stewart Bovell.^[1]

The screenshot shows the same Wikipedia article for George William Barnard. A red circle highlights the 'Information on George William Barnard in plain English' link. A red rectangle highlights the same link. The text of the article is identical to the left screenshot.



Empowering Users with Cognitive Disabilities

My Personal Web-Buddy

Where do I need help?

What kind of help do I need?

How do I want to access the help?



At the Original Content!



Contact

Johannes Kepler University Linz
Institute Integriert Studieren
Klaus Miesenberger / Peter Heumader

www.easyreading.eu

klaus.miesenberger@jku.at

peter.heumader@jku.at





Lets get started

Demo:

1. Easy Reading as a browser extension
2. Easy Reading embedded in a web-page
3. Backend functionalities

Hands on:

4. Installation and configuration of the extension
5. Creation and management of content replacements