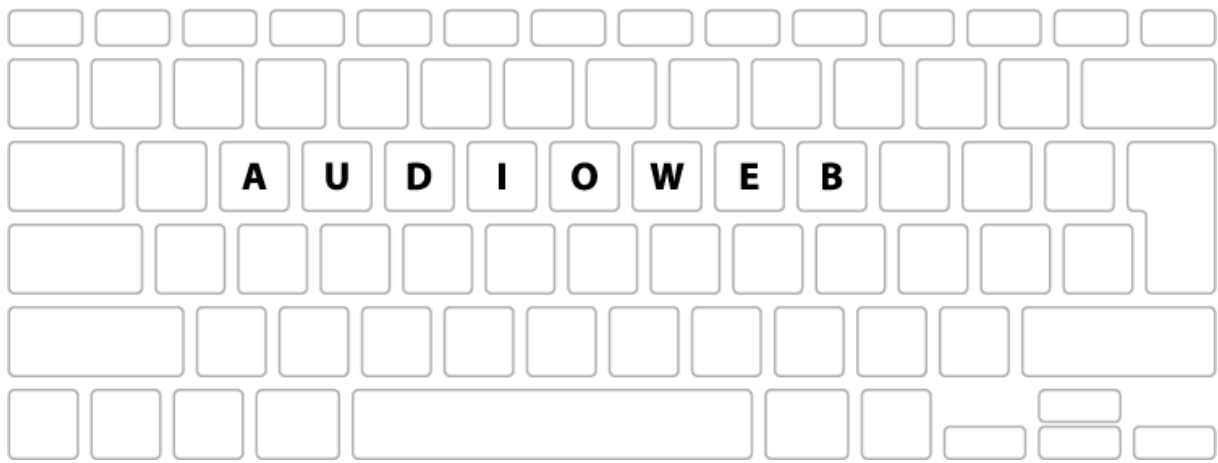




Ars Electronica - the Next Idea

[Concept Description]

The Pitch

AudioWeb is changing the world, by revolutionising the way we interact with the web.

As babies we are listening all the time and most people can speak by the age of 3, but we only become competent at reading and writing when we're 7 or 8. AudioWeb will provide a more natural way of accessing any online content, that doesn't require a monitor, a keyboard or even a desk. In the not-too-distant future, the recipe you're following online will be read aloud to you by AudioWeb while your hands are covered in flour and egg.

It's time for the web to speak.

The Opportunity

AudioWeb is 'audifying' the internet – converting the normal reading/writing experience of the web into a speaking/listening experience. It is at heart a technology, which could be realised in the form of a software product, a service, or some mix of the two. Blind people will be our lead-users and early adopters, but our aim is for mass-market acceptance and systemic behavioural change.

The big problem we are initially solving is:

- **How could a blind person access the internet?**

Or to turn this on its head, and make it relevant for all of us:

- **Why can't we listen or speak to the internet? And what would it sound like?**

If you try to listen to the internet today you might be visually impaired and using a screen-reader, or fully sighted and using Siri on the iPhone. Both these current solutions range from poor to awful. They speak the text on a webpage from top to bottom, in a single, robotic monotone. Not only is it an awful user experience, but they are expensive, costing

£700 per licence for JAWS (which the majority of blind people are using today).

Screenreaders are slow, frustrating and confusing: All colours, fonts, formatting and layout information is omitted, resulting in a “text-only” experience. This is a huge wasted opportunity, as sound can be far richer than a single voice, and can be exploited to convey deeper meaning.

The Concept

AudioWeb uses sound to present information in the way a graphic designer uses colour, layout and style to convey information beyond the text of a page. We use audio cues, multiple voices and sound effects to convey context and add meaning to the textual content, giving a richer, deeper experience of the web. We are effectively embellishing the spoken word just as the graphic designer does to the written word.

For instance, headings would be spoken in a different voice to subheadings, and body text would be spoken by a third voice (perhaps a woman for the heading, and man for the subheading, and a second woman for the body text).

Links would be implied by sound effects and potentially by changes to the tonal qualities of the voice or the background music. Colour changes could be achieved in the same way.

The final result is to have a beautiful, absorbing, interactive and fun audio experience, which is as rich and as individual as the visual experiences on the web today. In the long term we see people will be able to personalise their audio sites just as they do today with themes for their blogs. Larger companies will be able to tailor their brands and their corporate identities with polished soundtracks, voiceovers and audio interaction.

The Existing Prototype

AudioWeb has already been developed into a fully working interactive prototype. It has been tried and tested by people with a range of visual impairments and has received very positive feedback. We have an ever-expanding list of manually audified websites, and are developing an algorithm to automate the process of deciding how best to audify a site.

Awards Won

- Helen Hamlyn Centre for Design – Inclusive Design Award
- Matthews Wrightson – Business Award
- James Dyson Foundation – IDE design award

Press Coverage

- BBC News Channel,
- bbc.co.uk
- Telegraph.co.uk
- N-TV – the German national television network
- Metropolis Magazine

Once AudioWeb has been developed to work across the internet, we see huge potential for applications in the mass market:

You could be

- riding a bicycle, listening to emails;
- on the bus speaking your Google search;
- or making a cake, and with dirty hands, asking for the next step in the recipe

Indeed many sighted people have already enjoyed using the prototype, and want one for themselves.

The History

AudioWeb is my solo graduation project from the Innovation Design Engineering course at the RCA and Imperial. I was full time on it from February to July, and have been working on it part time since then. I am the ideator and first founding member of the team.

I was inspired initially by other inclusive design projects which designed with disabled or elderly people in mind, but then were widely adopted by the mass market - products such as OXO good-grips, and the Ford Focus. Thus I chose to tackle an issue faced by an extreme user group, in this case the blind, in the hope that if I could design something that was easier for them to use, it would also be easier for the population at large.

What is novel?

The idea of being able to speak to, and listen to websites does not exist yet. Siri only allows you to speak and listen to your iPhone but not the wider web.

AudioWeb crucially brings context back to spoken content using varied voices, multiple audio cues, music and effects; we have found this to be the key to usability. We are already working to automatically prioritise the content on a page, making it more user-friendly as audio – something which has not yet been achieved by any competitive products. In the same way that good graphic design enhances the visual, AudioWeb is pioneering the industry of audio design. We hope to create greater understanding and a more enjoyable web experience for all.

Impact of the idea

This an obvious tool for individuals with visual impairment - currently estimated at nearly 2 million in the UK alone, 285 million worldwide. Today, the screen-readers they use cost up to £700 per license.

Our intention is to refine the product for the visually impaired, then to release it to the mass market. Imagine the day you can listen to your Twitter feeds on-the-go or ask for the next step in a recipe while your hands are covered in flour.

Existing solutions

Big players in the industry for accessibility software for the visually impaired are: JAWS, Dolphin and Apple VoiceOver. They have expensive products and are slow to innovate, which is their weakness. Their strength is that they are the incumbents in the existing market, with little competition.

Having said that, the visually impaired community will go out of their way to access to the very best products available, and I have already met with people from the RNIB, Guide Dogs for the Blind, and St Dunstons, all of whom could help distribute and publicise our product in the UK. I have also attended Sight Village - the national fair for assistive technology in the UK, where we could exhibit.

The Creator



Sam Jewell

Ma/MEng Cambridge and MIT, Ma/MSc Innovation Design Engineering, RCA
Ideator, deeply understands both the visually impaired community, and what it means to listen to the internet.