



Accessibility: best practice and practical implementation...

Click to edit Master subtitle style



- accessibility and usability
- the evolution of the internet
- the disabled community
- legislation, best practice and compliance
- benefits of accessibility
- Talklets
- summary and conclusions

what does web accessibility mean?

Talklets  Text to Speech Technology

- **Web accessibility** refers to the practice of making websites usable by people of all abilities and disabilities. When sites are correctly designed, developed and edited, all users can have equal access to information and functionality.
- The needs that Web accessibility aims to address include:
 - **Visual:** visual impairments including blindness, various common types of low vision and poor eyesight, various types of colour blindness;
 - **Motor/Mobility:** e.g. difficulty or inability to use the hands, including tremors, muscle slowness, loss of fine muscle control, etc., due to conditions such as Parkinson's disease, muscular dystrophy, cerebral palsy, stroke;
 - **Auditory:** deafness or hearing impairments, including individuals who are hard of hearing;
 - **Seizures:** Photo epileptic seizures caused by visual strobe or flashing effects.
 - **Cognitive/Intellectual:** Developmental disabilities, learning disabilities (dyslexia, dyscalculia etc.), and cognitive disabilities of various origins, affecting memory, attention, developmental "maturity," problem-solving and logic skills, etc.;

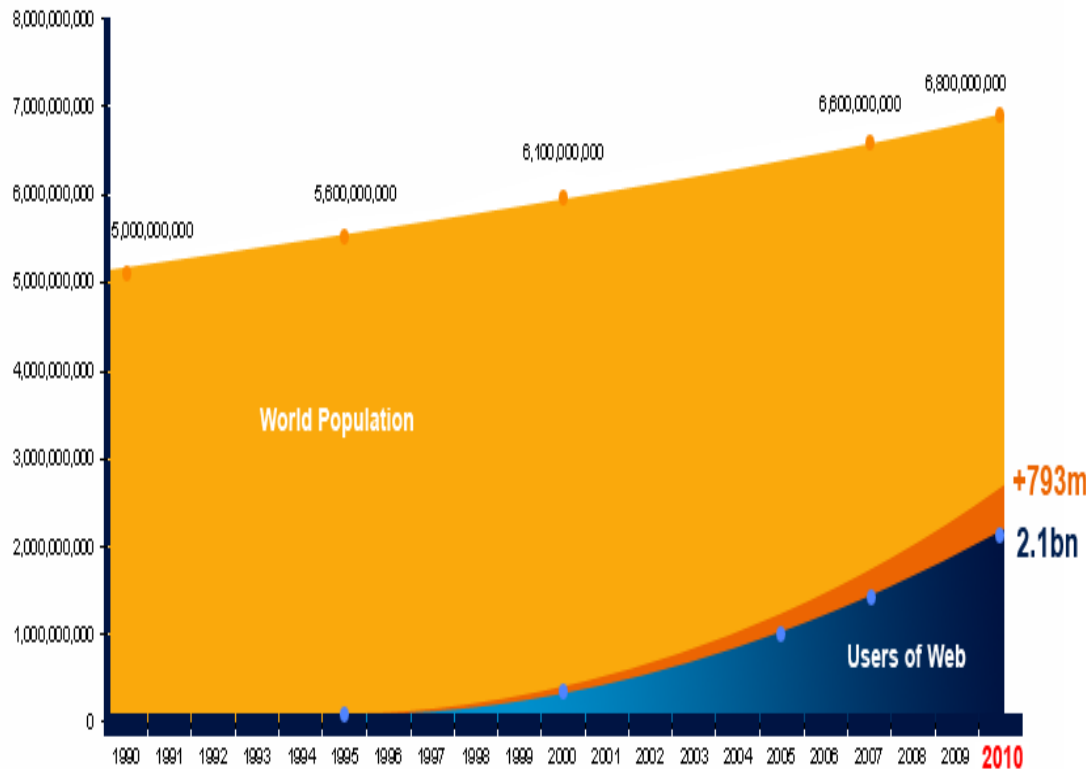
accessibility versus usability

Talklets Text-to-Speech Technology



- **Accessibility** is ensuring that all users can access all services and content, while:
- **Usability** is ensuring that the process of accessing services and content is as intuitive and efficient as possible.
- The delineation between the two is increasingly becoming narrow
- Most users require some form of accessibility in order to make their interaction possible, e.g.
 - The use of mobile/PDA technology in vehicles
 - Screen manipulation for worsening visual impairment
 - Content manipulation to enable content to be manipulated from one format to another
- As the line between access and use blurs, more developers build technology that **accommodates** all users

...and why is it relevant?



By **2010**, it is forecast that there will be **2,100,000,000** internet users.

Of these 18% - 22% of users are expected to suffer from a disability that will prevent them from interacting fully with the internet.

We also know that a large proportion of the remaining 80% of the global market also benefit from, or simply enjoy using, our technologies. This is a huge worldwide business opportunity.

Source:

World population: <http://www.iiasa.ac.at/Research/POP/proj07/index.html?sb=5>

Internet users: http://www.etforecasts.com/products/ES_intusersv2.htm

Disability statistics: <http://jarmin.com/accessibility/access/barriers.html>

the web accessibility rationale

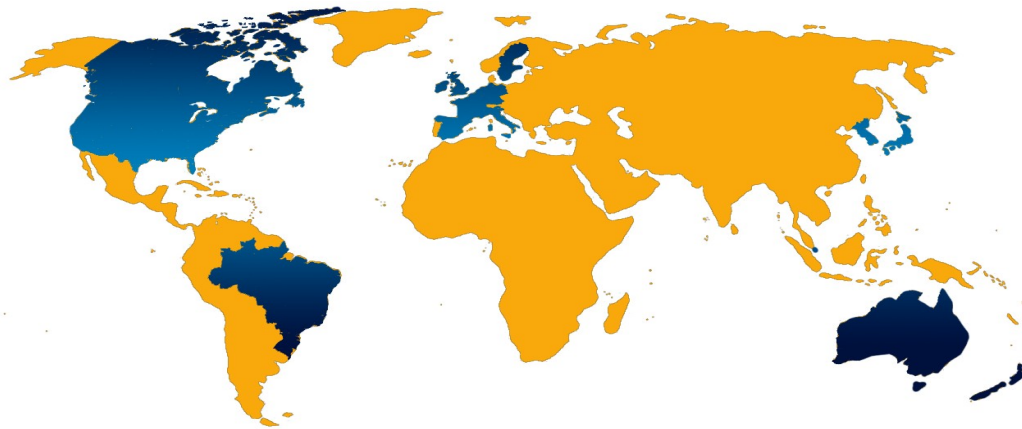
Text-to-Speech Technology



- Historically, driven by the need to be compliant
- Has been associated with corporate social responsibility, best practice and inclusion
- Perception is as a necessary evil, not a valuable set of business processes and tools
- Has meant that some sites have been mirrored in the past (text only sites managed in parallel to 'main sites' – notable examples are Tesco and Manchester United)
- More recently, tangible benefits accrued from the introduction of accessibility technology have changed perceptions:
 - E-comm sales increase demonstrably after the introduction of accessibility technology
 - Tesco claim to have increased e-comm revenues by £20 million
 - Daxon claim an increase of between 5% and 10% on certain sites
 - Advertising Revenues increase
 - More returns and greater average duration and stays
 - Increased market opportunities
 - a global splinter market of 800 million
 - Brand extension and differentiation
 - Novelty, uniqueness and
 - Inclusion
 - Diversity and best practice
 - Support and communication
 - Reduction in support costs

market dynamics and legal realities...

Talklets Text-to-Speech Technology



Australia Disability Discrimination Act

Canada – CLFI

EU – “eEurope 2002 Accessibility”

France – Law 2005-102

Germany – Act on Equal Opportunity

Ireland – NDA

Italy – Law 4

Japan – JIS X 8341-3 Standard

Holland – Act on Equal Opportunities

- **Laws and best practice mandate inclusion:**
 - DDA Code of Practice 2005 (UK)/ ADA Sections 504/508 (US)
 - “...service provider owes a duty of reasonable adjustment to ‘disabled persons’...”
 - W3C and WCAG
 - “Perceivable, operable, understandable, robust”
 - BS8878
 - “Policy, Principles, Personalization, Product, Practices”
- **Legislation is biting**, Target, a US based retailer was recently the subject of a \$6,000,000 out of court settlement with the NFB (National Federation of the blind) for not providing “*inadequate equality and adjustment for the disabled*”.

specifically, in the UK...



- Market realities in the UK:
 - There are 8.6 million registered disabled people in the UK - 14% of the population (source: DRC 2)
 - One in 12 men and one in 200 women have some form of colour blindness - 9% of the UK population (source: IEE)
 - Two million UK residents have a sight problem - 4% of the population (source: RNIB 4)
 - 12 million people aged 60 or over - 21% of the UK population (source: UK Government)
 - Dyslexia is believed to impact as many as 16% of the UK population (source: BDA)
- UK Legislation: Disability Discrimination Act
 - Section III of the DDA, which refers to accessible websites, came into force on **1st October 1999** and the Code of Practice for this section of the DDA was published on 27th May 2002.
 - Under the Disability Discrimination Act of 2005, all websites providing public services must make reasonable adjustments to ensure that the services they provide online are equally as accessible to disabled Internet users as to other members of the public.



- Part III of the DDA refers to the provision of goods, facilities and services. The Code of Practice 11, which **specifically mentions websites**:
 - The relevant quotes from the 175-page Code of Practice are:
 - 2.2 (p7): “The Disability Discrimination Act makes it unlawful for a service provider to discriminate against a disabled person by refusing to provide any service which it provides to members of the public.”
 - 4.7 (p39): “**From 1st October 1999** a service provider has to take reasonable steps to change a practice which makes it unreasonably difficult for disabled people to make use of its services.”
 - 2.13 - 2.17 (p11-13): “What services are affected by the Disability Discrimination Act? An airline company provides a flight reservation and booking service to the public on its website. This is a provision of a service and is subject to the act.”
 - 5.23 (p71): “For people with visual impairments, the range of auxiliary aids or services which it might be reasonable to provide to ensure that services are accessible might include ... **accessible websites**.”
 - 5.26 (p68): “For people with hearing disabilities, the range of auxiliary aids or services which it might be reasonable to provide to ensure that services are accessible might include ... **accessible websites**.”



- ADA General Rule for the prohibition of discrimination
 - “No individual shall be discriminated against on the basis of disability in the full and equal enjoyment of the goods, services, facilities, privileges, advantages, or accommodations of any place of public accommodation by any person who owns, leases (or leases to), or operates a place of public accommodation”
- Americans with Disabilities Act 1990
- (i) Denial of participation
 - It shall be discriminatory to subject an individual or class of individuals on the basis of a disability or disabilities of such individual or class, directly, or through contractual, licensing, or other arrangements, to a denial of the opportunity of the individual or class **to participate in or benefit from the goods, services, facilities, privileges, advantages, or accommodations of an entity.**
- (ii) Participation in unequal benefit
 - It shall be discriminatory to afford an individual or class of individuals, on the basis of a disability or disabilities of such individual or **class, directly, or through contractual, licensing, or other arrangements with the opportunity to participate in or benefit from a good, service, facility, privilege, advantage, or accommodation that is not equal to that afforded to other individuals.**
- (iii) Separate benefit
 - It shall be discriminatory to provide an individual or class of individuals, on the basis of a disability or disabilities of such individual or class, directly, or through contractual, licensing, or other arrangements with a good, service, facility, privilege, advantage, or accommodation that is different or separate from that provided to other individuals, unless such action is necessary to provide the individual or class of individuals with a good, service, facility, privilege, advantage, or accommodation, or other opportunity that is as effective as that provided to others”.
- Section 508
 - In 1998, Congress amended the Rehabilitation Act to require Federal agencies to make their electronic and information technology accessible to people with disabilities. Inaccessible technology interferes with an individual’s ability to obtain and use information quickly and easily.



- As a result of this legislation, organisations can find themselves facing legal action. The following case is an example of a class action lawsuit filed by blind customers.
 - Target vs National Federation of the Blind (NFB)
 - The NFB recently filed a class action lawsuit against Target, claiming that the retailer's website was not fully accessible to blind users.
 - Target argued that its online service was not subject to the ADA. The judge dismissed this claim, deciding that because the Target website was an extension of Target's physical shopping network, Target's online service did fall under the ADA.
- **Target settled out of court, for \$6million.**

the evolution of web accessibility

Tinklets Text-to-Speech Technology



There remain three global drivers for web accessibility, typically derived from international and local standards:

- International Standards - WC3:
 - » 1999 Web Accessibility Initiative
 - » 2001 WCAG 1.0
 - » 2003 WCAG 2.0
 - » 2008 (forecast) release of WCAG
- Local Standards - BSI
 - » PAS 78 2006
 - » BS 8878 (forecast launch 03/09)
- Industry Adopters
 - » Software – Microsoft, Apple, Oracle et al
 - » Search – Google, Yahoo et al
 - » Hosting – ISPs and hosting services
- The law is increasingly stringent, standards are increasingly prescriptive and best practice appears to be prevailing.

what is exactly is accessibility technology?



Ideally, web sites that are engineered at the code level to be fully accessible to “AAA” standards. However, as the WCAG have discovered, this is simply not possible. As such, technologies have emerged that make accessibility possible:

- Screen readers
- Visual controls
- Screen magnifiers
- Braille interfaces
- Closed captioning
- Translation systems
- Switches
- Voice/speech recognition
- Supportive technologies
 - Dictionaries, lexicons, spelling etc

can anyone be compliant?

Talklets Text-to-Speech Technology



“Note that even content that conforms at the highest level (AAA) will not be accessible to individuals with all types, degrees, or combinations of disability, particularly in the cognitive language and learning areas. Authors are encouraged to consider the full range of techniques, including the advisory techniques, as well as to seek relevant advice about current best practice to ensure that Web content is accessible, as far as possible, to this community”.
(WCAG 2.0)

Accessibility is clearly not an issue that can be solved definitively. Guidelines are vital, but they can only go so far towards providing a website that is truly accessible to all users.

so, what is best practice?



- become a customer advocate:
 - pre-emptive planning
 - broad tool set for as many user communities as possible
 - instant and global access to all users with no download
 - ease of use
 - flexible and extensible
 - ensure high availability, speed and user response
- minimise impact on existing sites
- take the onus of user/compliance responsibility away from the user

Product Portfolio

Talklets Text-to-Speech Technology



Commercial Release:

- Talklets
Toolbar
- Talklets

Talklets Text-to-Speech Technology



Beta Release:

- Talklets
Toolbox
- Talklets Mobile
- Talklets T-
Browser

Talklets Text-to-Speech Technology



Alpha Release

- Talklets
Translator
- Talklets Portal

Talklets Text-to-Speech Technology



R&D Release:

- Talklets Synthetic
Voices

Talklets Text-to-Speech Technology



Internet offering: Talklets ToolBar...

Talklets Text-to-Speech Technology



‘Software as a Service’ delivered toolbar (SAAS)

- ❖ Core product: ‘embedded speech’
- ❖ Easily added into any web page by website owner
- ❖ Fully secure hosted and managed service
- ❖ No download for end users
- ❖ Immediately available to ALL visitors to the website
- ❖ Intuitive, easy to use toolbar
- ❖ Hot keys and right-click
- ❖ Clear, quality speech with point to read and page reader/saver
- ❖ Can be turned “on” or “off”
- ❖ Can be re-skinned to match corporate brand



Sales Rationale – Why Talklets?

Talklets Text-to-Speech Technology



- **A unique proposition:**
 - **Compliance**
 - With local legislation, industry standards and best practice
 - **Convenience**
 - Delivering user control (device and format independence)
 - **Communication**
 - With a broader audience (800 million disabled users)
 - **Cost management**
 - Containing costs in areas such as support, documentation et al
 - **Commerce**
 - Demonstrably driving e-commerce revenues through increased traffic and average user sessions – increased market and revenues
 - **CSR**
 - Delivering inclusion, best practice and diversity
 - **Competitive Edge**
 - Differentiation, brand extension and novelty
- **Common sense: compliance + market opportunity + increased sales + differentiation + reduced costs**

emerging technologies

Talklets Text-to-Speech Technology



Spoken text messaging instantly converts texts and emails to speech, and enables users to control phone handsets through voice commands.

Offers implicit 'handsfree' compliance on all mobile platforms

13/02/09

alpha technology

Talklets Text-to-Speech Technology



- Talklets Translator
 - Vocalised language to language translation in real-time
 - Market of \$15 billion
 - No other discernable offerings in the market



13/02/09

TEXTIC

Future products: Synthetic Voices

Talklets Text-to-Speech Technology



Talklets  VOICES

- ❖ Choice of Broadcasting Languages
- ❖ Choice of Accents and Dialects
- ❖ Age and Gender Choices
- ❖ Extending brands with **Voice Creation Service**



- Textic is a UK based software company; origins are in the provision of software tools enabling internet accessibility for the disabled
- Pioneered a software service that enables text to be converted to high quality speech, delivered as a service rather than a software download
- Products for both web and mobile phones
- Key market drivers:
 - Global market of circa 1 billion disabled users
 - Compliance with local and international law
 - CSR, inclusion, diversity, best practice
 - Brand extension and differentiation
- Proven and experienced management team



The Voice of the Web...

steve@textic.com
@stevekennedyuk