

# Web Accessibility Evolution in the UK

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## What are our aims?

- **Motivation** : Assess
- **Object** : Web Accessibility changes
- **Purpose** : Evaluate trend
- **Domain** : Web
- **Perspective** : User / Maintainer
- **Scope** : Web Site Maintenance

[Basi86]

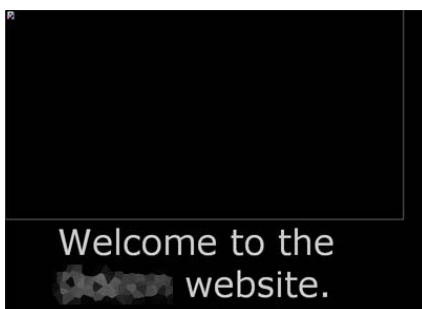
## What is Web Accessibility?

- A Website can have barriers just like buildings, affecting:
  - Disabled users
  - Elderly users
  - Users with older technologies
  - Their relatives
- W3C outlines potential “web barriers”.
- Governments have introduced legislation. SECTION508 (USA), SENDA (UK)

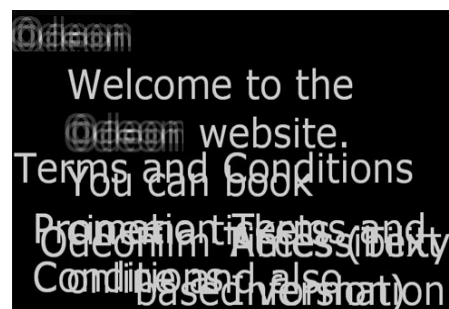
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## Cinema Example



**Before**



**After**

- Example of a failed “accessible” cinema website version
- Images are disabled and fonts enlarged (x 5).

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## Another cinema, better but still barriers



- Contrast between text and background is poor. (barrier)
- “Logo” as link text isn’t very useful. (barrier)

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## What is the Problem?

- Little awareness of web accessibility
- Implications of inaccessible pages not widely known
- More and more essential services on the Web
- Those with most to gain are being overlooked

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## How did we calculate Web Accessibility?

$\#instances\ of\ a\ barrier * conf(Barrier) / (page\ size)$

- Measure Based on instances of “barriers”
  - Tool: AccessValet [AccV05] used to detect instances
- Some barriers are subjective.
- AccessValet provides a “confidence” indicator
  - Contrast easy to determine
  - Is “logo” a valid link text?
- Greater confidence = greater weighting

## Classification of Pages

- Used Lazar’s [Laz03] scale.

| Measure       | Code | Accessibility Level        |
|---------------|------|----------------------------|
| $\leq 4$      | 1    | Accessible                 |
| $\geq 4 < 8$  | 2    | Marginally Inaccessible    |
| $\geq 8 < 11$ | 3    | Moderately Inaccessible    |
| $\geq 11$     | 4    | Substantially Inaccessible |

## How did we take the samples?

- Used [Internet Archive](#) (inspired by [Hak03])
- **Randomly** selected **homepages** from;
  - UK Public Organisations (#13)
  - UK Publicly Traded Companies (#10)
  - UK Higher Education Institutions (#34)
- Homepage snapshot beginning of each year (2000 – 2004)

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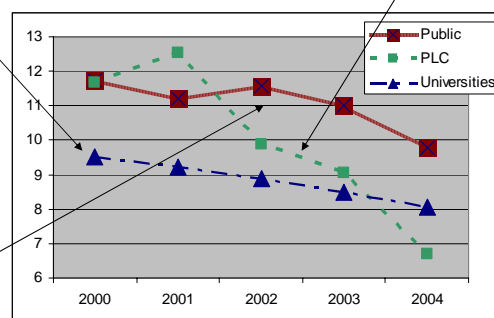
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## Results

Universities start off better –  
gradual improvement

Companies show  
marked reduction in  
barriers

Public orgs  
Make small  
improvement  
but have  
highest score



Changes in Measure over time

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## Categories

- Most public organisations had “**Substantially Inaccessible**” homepages (2000-2004)
- Most Universities maintained “**Moderately Inaccessible**” homepages
- Public Companies categories changed significantly for the better

## Observations

- SENDA (2002) legislation had no significant impact on University sites
- Public companies websites changed dramatically
- Public companies like “**Splash pages**”
- Universities continued down the “portal” route.
- Public Organisations showed little change

## References

- [Schn92] Schneiderman, B., "*Tree visualization with tree-maps: 2-d space-filling approach*". ACM Transactions on Graphics (TOG), 1992. 11 (1): p. 92 - 99.
- [Laz03] Lazar, J., Beere, P., Greenidge, K., and Nagappa, Y. "*Web Accessibility in the Mid-Atlantic United States: A Study of 50 Home Pages.*" Universal Access in the Information Society Journal, 2(4), 331-341
- V. R. Basili, R. W. Selby, and D. H. Hutchens, "*Experimentation in software engineering,*" IEEE Trans. Softw. Eng., vol. 12, pp. 733-743, 1986.
- [AccV05] <http://valet.htmlhelp.com/access/>
- [Hak03] S. Hackett, B. Parmanto, and X. Zeng, "*Accessibility of Internet websites through time,*" SIGACCESS Access. Comput., pp. 32-39, 2004.