

Device Independence and the Mobile Web Initiative

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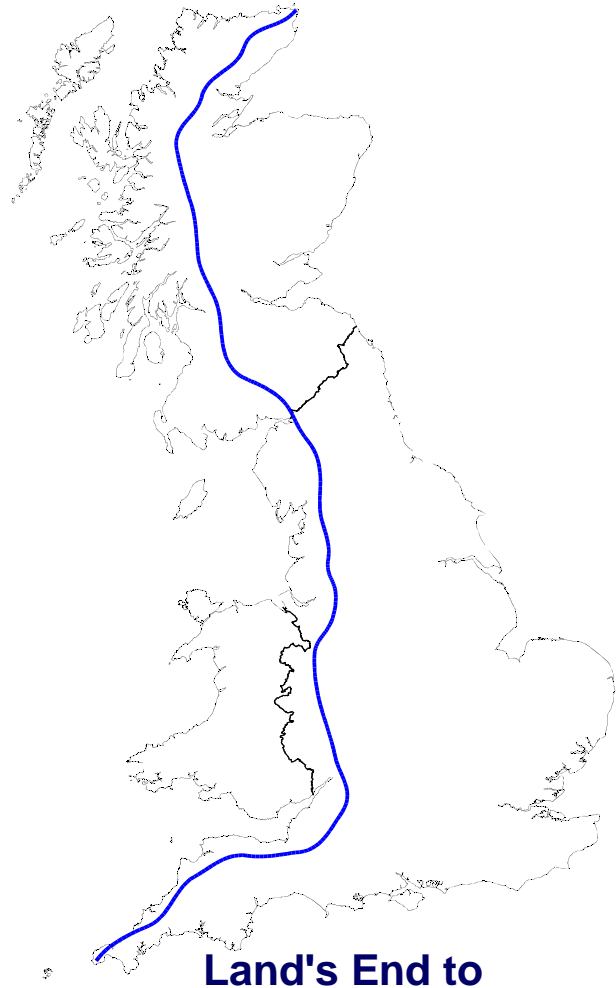
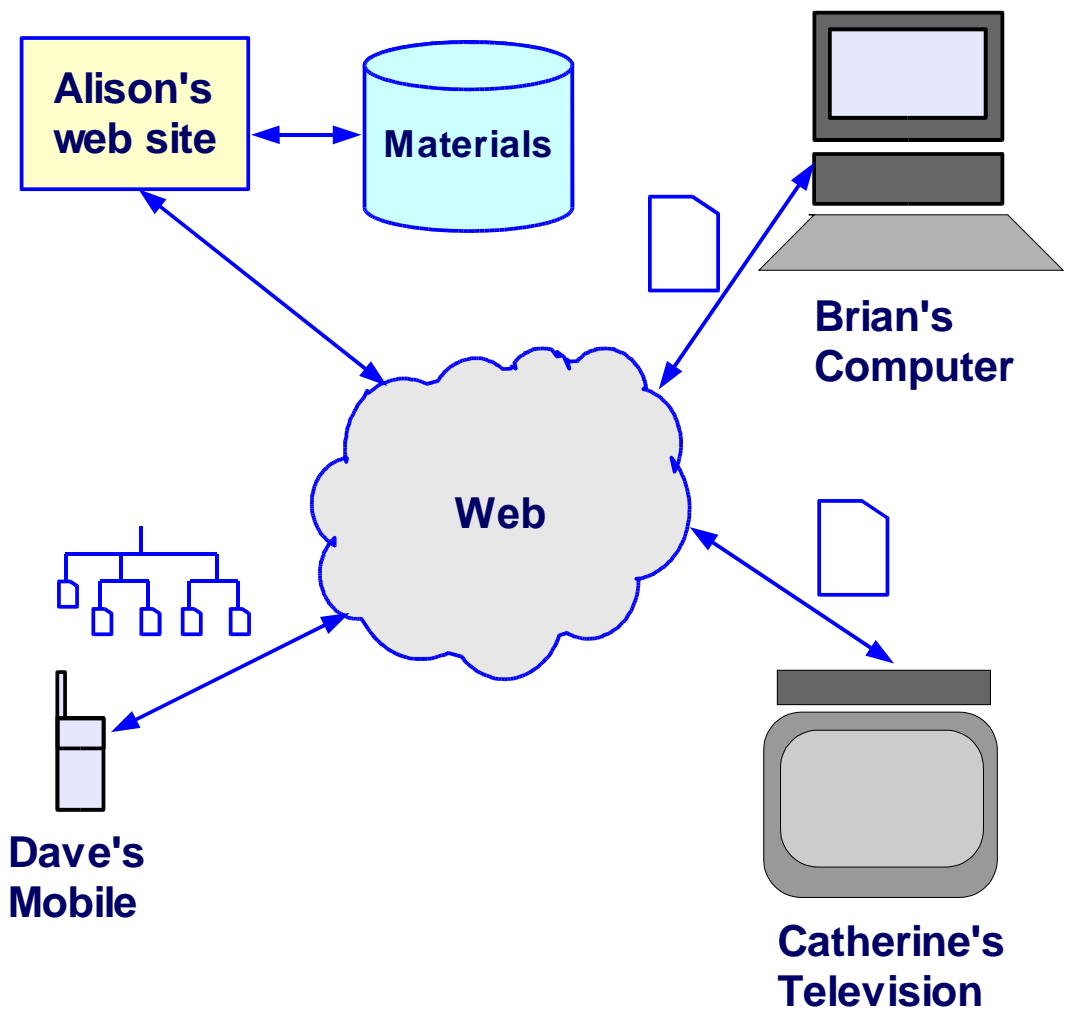
Chair W3C Device Independence Working Group

Director of Software Architecture

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- **The Device Independence Working Group Vision**
- **What DIWG has Learned**
- **The Technology Gap**
- **DIWG Specifications**
- **Conclusions**
- **References**

DIWG Vision: A Scenario



Land's End to John O'Groats by Bike

- **There is only one Web!**
 - We must not cause fragmentation
- **There is a technology gap**
 - DIWG is working on bridging it
- **Additional terminology is needed**
 - DIWG Glossary [5]
- **Some fundamental assumptions don't always apply**
 - An author's page may be a user's microsite
- **Device information is key**
 - Publicly available information is patchy
- **Device independence is evolutionary technology**
 - What authors write and what devices process can be different
 - A user agent 'revolution' is not necessary
 - 'Old' devices can still participate
 - Adaptation can occur anywhere

- **Authoring for device independence must be affordable**
 - lowest effort for 'functional user experience'
 - more effort for 'harmonized user experience'
- **Authoring for device independence is hard**
 - There are challenges [2] and some known techniques [3]
- **Capturing author intent is key**
- **Separation of concerns is key**
 - separation of layout from content is crucial
 - separation of layout from style is valuable
- **Accessibility can benefit from DI technology**
 - Common problems and potential for shared solutions
 - WAI and DIWG have close contacts
 - Significant accessibility input to recent workshop [9]
 - Assistive technologies are just different devices

- **Technology-based solutions are possible**
 - Commercial implementations are existence proofs
 - **Software vendors**
 - **Mobile Network Operators etc.**
- **Standards are in the process of catching up**
 - Latest W3C specifications avoid device dependencies
 - **XForms and XHTML Version 2**
- **DIWG approach**
 - compound document based on these new specifications
 - **leveraging the work of the CDF working group**
 - additional DI capabilities:
 - **content selection [8], layout**
 - **aggregation and decomposition**
 - **metadata for content adaptation [9], [6]**

- **Commercial 'repository' implementations exist**
 - Software vendors
 - Mobile Network Operators etc.
- **Some standards do exist**
 - CC/PP [4] and UAPProf
- **But**
 - Publicly available information is patchy
- **DIWG approach**
 - normative core vocabulary
 - **data types and units included**
 - **modular extension framework**
 - **access mechanisms for authors e.g.[8]**
 - **represented as an OWL ontology [7]**
 - updates and extensions to CC/PP specifications

- **DIWG's work is highly relevant to the Mobile Web Initiative**
 - Specifications under development
 - **Authoring**
 - **Device information aka "Delivery Context"**
 - Good working relationships with other key W3C groups
 - **XHTML, XForms, CSS, MMI, WAI, ...**
 - Experience of the field
 - Results of previous investigations
- **By the way, DIWG is offering opportunities for participation**
 - to speed up development of its specifications
- **Adaptation is the key to evolution**
 - Avoid user agent differences
 - Overcome device limitations
 - Migrate towards the device over time

- [1] W3C Device Independence Working Group (see <http://www.w3.org/2001/di/>)
- [2] Authoring Challenges for Device Independence (see <http://www.w3.org/TR/2003/NOTE-acdi-20030901/>)
- [3] Authoring Techniques for Device Independence (see <http://www.w3.org/TR/2004/NOTE-di-atdi-20040218/>)
- [4] Composite Capability/Preference Profiles (CC/PP): Structure and Vocabularies 1.0 (see <http://www.w3.org/TR/2004/REC-CCPP-struct-vocab-20040115/>)
- [5] Glossary of Terms for Device Independence (see <http://www.w3.org/TR/2003/WD-di-gloss-20030825/>)
- [6] RDF Primer (see <http://www.w3.org/TR/rdf-primer/>)
- [7] OWL Web Ontology Language Overview (see <http://www.w3.org/TR/owl-features/>)
- [8] Content Selection for Device Independence (DISelect) 1.0 (see <http://www.w3.org/TR/2004/WD-cselection-20040611/>)
- [9] W3C Workshop on Metadata for Content Adaptation (see <http://www.w3.org/2004/06/DI-MCA-WS/>)