

# Device Independence and the Mobile Web Initiative

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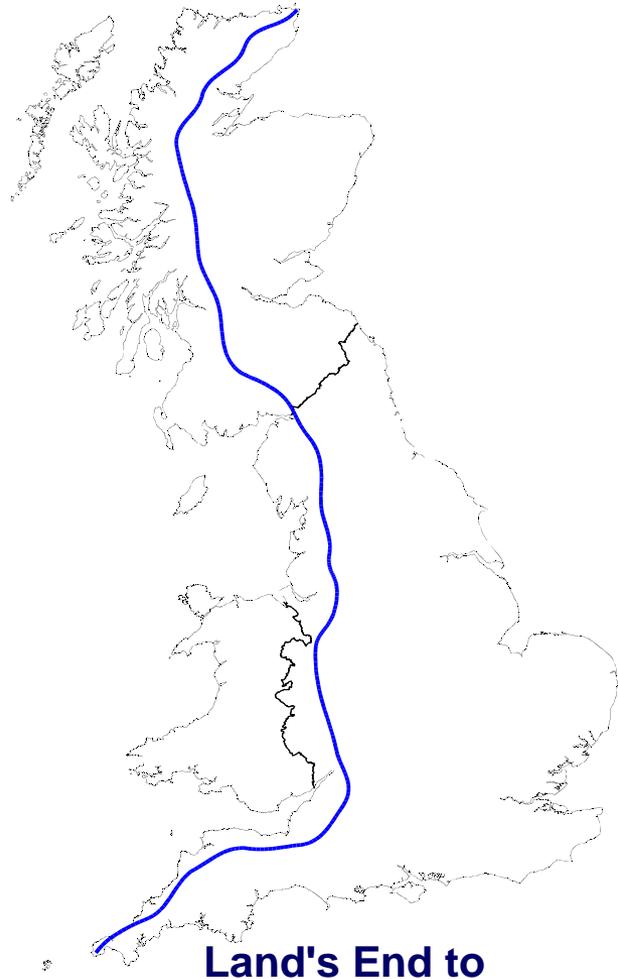
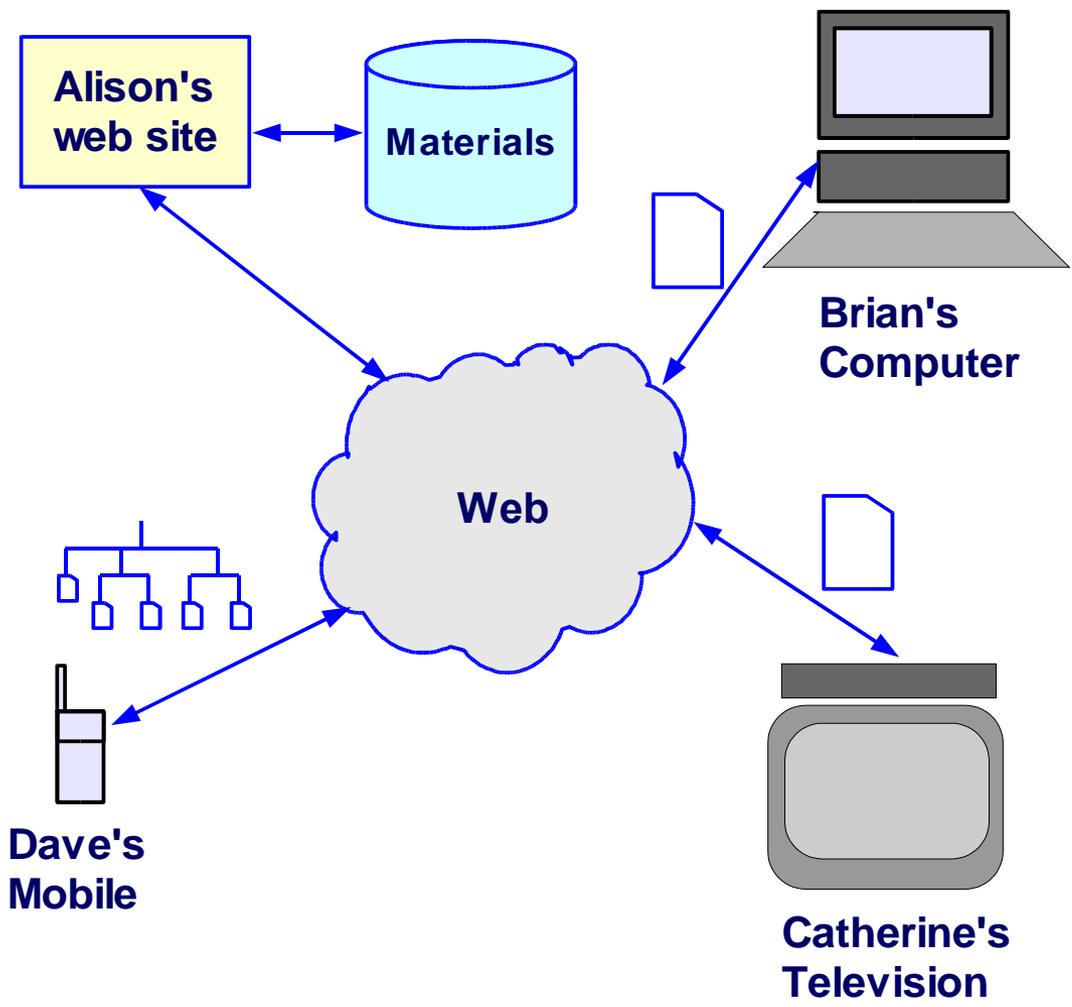
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- **The Device Independence Working Group Vision**
- **What DIWG has Learned**
- **The Technology Gap**
- **DIWG Specifications**
- **Conclusions**
- **References**

# DIWG Vision: A Scenario



- **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/>)