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EDITORIAL

New challenges in web accessibility

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The Web is a foundational infrastructure for our society. Web access is now an imperative part of our education, work and everyday life. That is why we cannot stop ensuring and improving access to services on the Web for every member of our society.

Web for All (W4A) is an annual international conference to share and discuss the latest technologies and practices for improving Web accessibility for persons with disabilities. This conference is decidedly cross-disciplinary in nature and brings together users, accessibility experts, graphic designers, and technologists from academia and industry to discuss how accessibility can be supported.

W4A 2012 was held at Lyon, France receiving 26 papers and 71 participants. Every year the conference poses a main theme to capture the latest trends and challenges in the area, this year's theme being "the Web of Data". Quote, "Laying beneath the surface of the Web there are a number of phenomena such as trends and patterns in information structure and in user behavior that do shape the way we communicate, consume and browse. As far as accessibility is concerned, Web content plays a central role in an ecosystem where user agents, authoring tools, crowd-sourcing frameworks and testing tools determine how accessible is the Web".

Among the presented papers, two papers were selected and thoroughly reviewed and revised for journal format, to be published in the UAIS journal. The first paper

"Acceptance Tests for validating ARIA requirements in Widgets" approaches the data from a programmatic perspective by investigating data-oriented Web programming methodologies such as dynamically changing pages based on dynamic data transactions.

Along with the evolution of high-performance script runtimes inside browsers and with the evolution of data exchange methods (e.g., JSON), dynamic Web applications are becoming the dominant Web user interface. The W3C WAI-ARIA is the metadata standard to make dynamic applications accessible by overlaying accessibility of the graphical user interface (GUI) as a layer for browsers to treat dynamic Web applications as GUI applications. However, testing can still be a challenge which "Acceptance Tests for validating ARIA requirements in Widgets" tries to address. The paper proposes a behavior-driven testing approach for checking accessibility issues of dynamic Web content, applies it to web pages containing dynamic content and compares the results with those produced by static accessibility checking tools and Tab Panel widget libraries, to check the conformance required by ARIA by comparing the results with manual evaluation.

The second paper "How to Present more Readable Text for People with Dyslexia" investigates the effects of visual text presentation on the ease-of-reading for people with dyslexia. The paper introduces results from a set of experimental tests looking at various types of improvement methods for presenting text to people with dyslexia by using eye-tracking systems. Larger text and character spacing, it seems, improves reading speed for all. This is critically important knowledge when investigating large data sets or analyzing results on which critical decisions will be made.

The importance of data is increasingly becoming more prevalent. Focus has grown since 2012 and by 2015 big

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data, broad data, and Data Science have become even more important. Focus has shifted from the concept of data underlying the Web, to that of the Web being defined by its data and the applications that help us make sense of it. This sense-making is another aspect of the Web which everyone requires and in which accessibility research leads the way.

Without innovative ideas and projects which laid the foundations for these new insights, insights exemplified by the papers included in this special section, everyone would be much poorer. It is hoped that this special section will encourage readers to consider the importance of new challenges in Web accessibility.