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HTML5 and the Learner of Spoken Languages

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Traditional corpora are not renowned for being user friendly. If learners are to derive maximum benefit from speech corpora, then better interfaces are needed. This paper proposes such a role for HTML5. DIT's dynamic speech corpus, FLUENT, contains a limited series of informal dialogues between friends and acquaintances. They are characterised by naturalness and their audio quality and marked-up using a schema which allows learners to retrieve features of spoken language, such as speaker intention, formulaicity and prosodic characteristics such as speed of delivery.

The requirement to combine audio assets and synchronous text animation has in the past necessitated the use of browser 'plug-in' technologies, such as Adobe Flash. Plug-in-based systems all suffer from major drawbacks. They are not installed by default on deployed browsers. More critically they obscure the underlying speech corpus structure. Also proprietary UIs offer no standard way of dealing with accessibility or dynamic interface reconfiguration, e.g. moving from corpus playback to concordance views. This makes design of a unified interface framework, with audio playback, synchronous text and speech, more difficult. Given the profusion of plug-in architectures and plug-in types, it is clear that such an environment is unsustainable for building tools for speech corpus visualisation. In order to overcome these challenges, FLUENT drew heavily on the HTML5 specification coupled with a user-centred design for L2 learners to specify and develop scalable, reusable and accessible UIs for many devices.This paper describes the design of the corpus schema and its close integration with the UI model.

Key words: speech corpus, HTML5, synchronisation, plug-in, visualisation, schema