Web Accessibility Evaluation with the Crowd: Using Glance to Rapidly Code User Testing Video

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User tests are an important part of web accessibility evaluation, but they takes a lot of time and energy to conduct and evaluate.
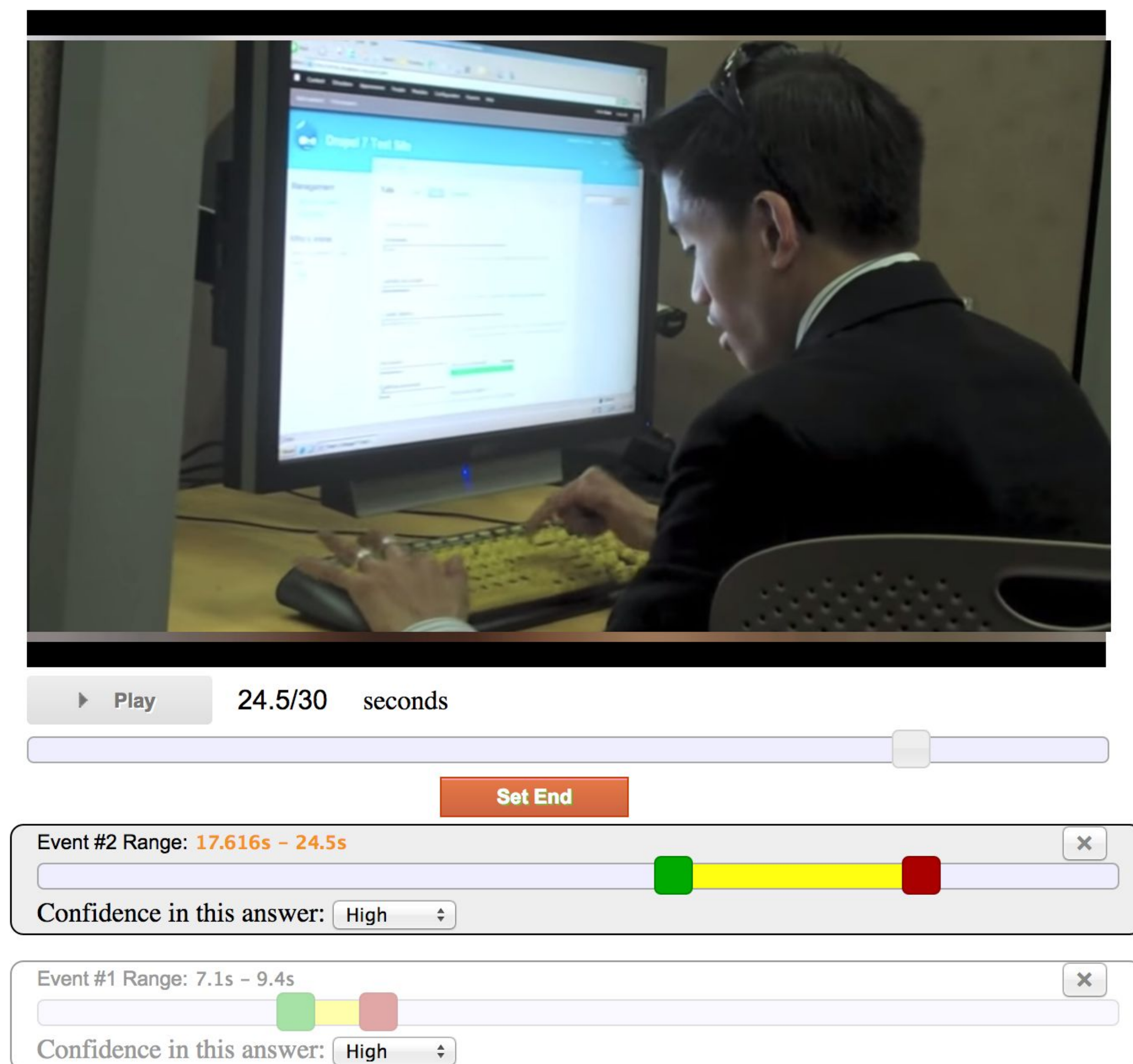
Glance is a crowd-powered video coding tool that provides answers to analysts within seconds.
- Workers get a short segment from a video.
- Multiple coders increase reliability.
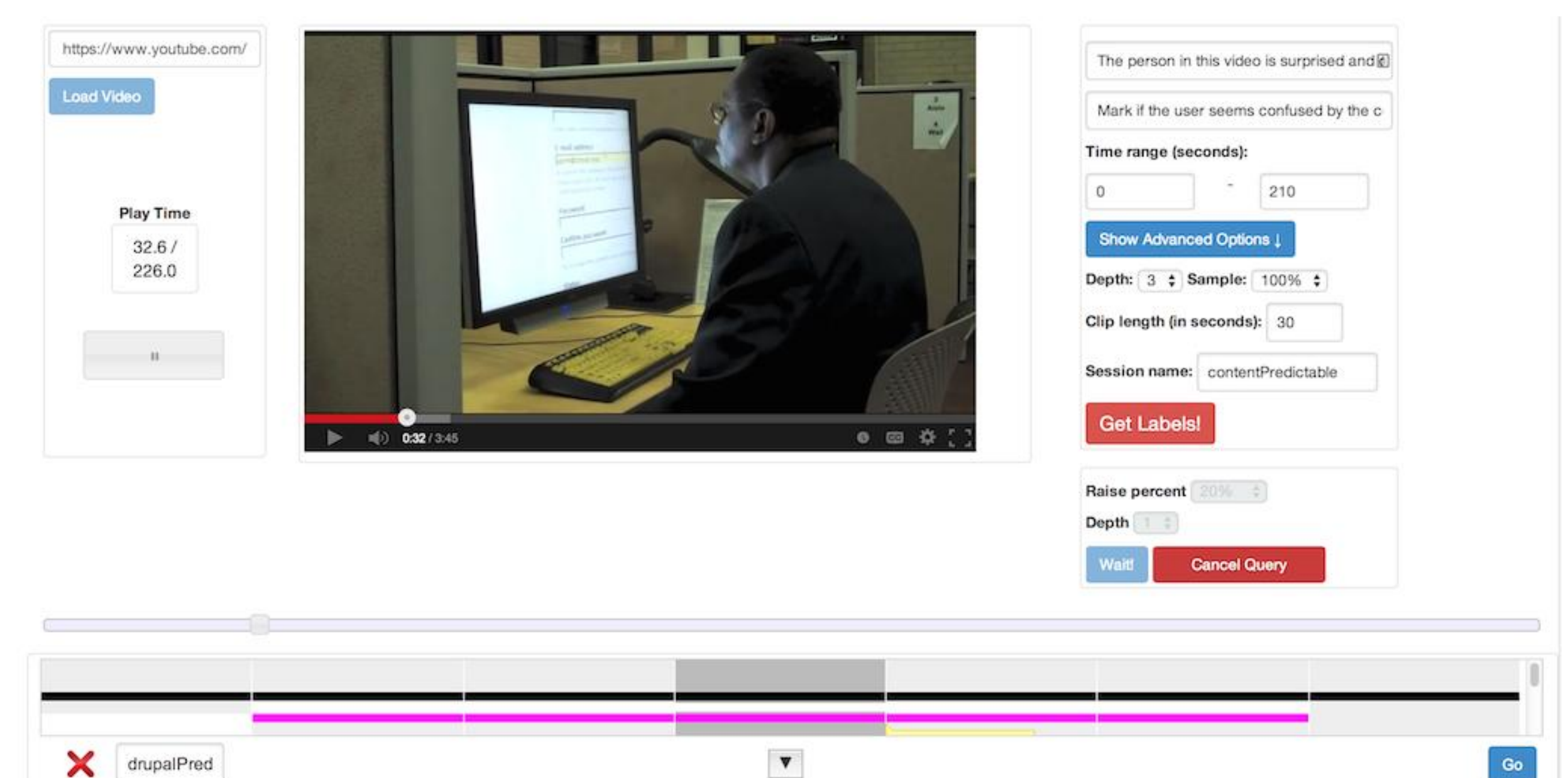- Crowd workers are screened for quality.

The Glance coding interface. Workers mark events as they see them occur.

Glance makes evaluating the results of a user study faster and easier.

Envisioned Interaction

1. Record videos of users interacting with website.
2. Use Glance to code videos based off of WCAG2 guidelines, such as "user encounters unreadable or difficult to understand text."
3. Use Glance's results to fix trouble spots.

The Glance analyst interface. Glance can code events in user testing videos quickly and accurately.

Feasability Experiment
- Evaluation - 20 MTurk workers, 3.5 minute video consiting of visually-impaired users using a website on a desktop computer.
- Coded for WCAG2 guideline "make content appear and operate in predictable ways."
- Precision of 80% and recall of 100%. Compareble to other anticipated uses of Glance.

Future Work
Glance has many possible applications within accessibility, including:
- Use Glance to file a text-based bug report to developers.
- Disabled users uploading video of their interaction with a website or app that is not accessible, use Glance to get help.

REFERENCES
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ROCHCI Rochester Human Computer Interaction