DEVELOPING AN ADAPTATION AND OTHER FEATURES FOR PINATA, A CHROME-BASED ADAPTIVE USER INTERFACE TOOL

Christian Ortega[1], Tejas Bhalerao[2], Amy Hurst[2], Foad Hamidi[2]
[1]Department of Computer Science and Engineering, Texas A&M University, 400 Bizzell St, College Station, Texas 77843
[2]Information Systems Department, University of Maryland at Baltimore County, 1000 Hilltop Cir, Baltimore, Maryland 21250

The Internet has become an essential tool for communication, entertainment, and employment. Unfortunately, web-based interfaces can be inaccessible or difficult to navigate for users who experience difficulty in accurately controlling pointing devices such as computer mice due to limited hand motion. We have developed PINATA (**P**ointing **I**nteraction **N**otifications and **A**dap**TA**tions), a Chrome-based plugin that adapts a browser's content to assist users with pointing problems and helps them become more aware of their pointing difficulties by providing feedback via customizable notifications.

PINATA was first developed in 2015 and initial work focused on assessment and visualization. Over the summer I extended these features, but focused on supporting a new adaptation. Oftentimes hyperlinks to websites can be difficult to target and click due its -text's size, color, and/or boldness. To combat this issue, I developed a new adaptation that detects when the user is experiencing difficulty in clicking on a hyperlink, manipulates its text to make it stand out, then offers a hotkey on the keyboard that can be pressed to take the user to the desired link.

PINATA is a work in progress that helps users who face pointing problems by allowing them to navigate the Internet with ease. In the future, the new adaptation should be evaluated to learn of its usefulness to users by conducting user studies. PINATA could also be extended in several ways: customization of the newest adaptation, redesign of the notification manager so that all clickable elements can be easily pressed, and added touch-screen functionality.