

Project description for Automation v2



2024-04-03

Modeled after [Matt's description for the "trend reporting" project](#)

Short Description

This project enhances the integration of automated AT response collection so that it can be more fully integrated into the community group's processes.

README

Problem

The ARIA-AT App's inability to automate some screen readers and the minimal visibility into the automation system mean that the project enjoys only a fraction of the benefit which automation can provide. This project aims to address those limitations.

Background

Throughout 2023, we researched and developed novel methods for automating screen readers and recording their behavior. At the beginning of 2024, we integrated some of this technology into ARIA-AT App, launching a proof-of-concept which empowered Test Admins to orchestrate the collection of the so-called "AT Responses" for any Test Plan in ARIA-AT. While this iteration represents a crucial milestone, its utility to the day-to-day practice of the ARIA-AT working mode is limited.

Goals

1. Reduce labor required to maintain Recommended Test Plan Reports
2. Increase visibility into the status of automated jobs

Out of scope

1. Support for Microsoft Narrator
2. Support for iOS VoiceOver
3. Support for Android Talkback
4. Automated analysis of AT responses (i.e. natural language processing)

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5. Automated triggering of response collection (e.g. in response to new browser versions)
6. Support for historic software versions

Primary deliverables

Deliverable	Priority	Target Date	Description
Safari & VoiceOver support	TBD	TBD	automated AT response collection from VoiceOver
Firefox & NVDA support	TBD	2024-04-01	automated AT response collection using Firefox
Verdict reuse	TBD	TBD	automated re-application of previously-assigned assertion verdicts
Enhanced job status	TBD	TBD	Surface more status information for automated AT response collection jobs
Enhance task orchestration	TBD	TBD	Perform some percentage of automated AT response collection on a system designed for arbitrary cloud computing

Key decisions and requirements

1. ARIA-AT App must communicate the status of the AT response collection system
2. The automation system must not corrupt or otherwise modify data that has been reported by a human

Risks

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Risk/Limitation	Severity	Likelihood	Mitigation
Software package ownership ambiguity	low	medium	Concurrent inquiry into alternate publication methods
Cloud computing resource scarcity	medium	medium	Concurrent investigation into deployment on Microsoft Azure
AT response data inaccuracy*	high	medium	Careful human review of all AT responses collected in automation

* We don't yet have confidence that the AT responses collected in automation completely match what is actually experienced by human users. This is true not just for the components to be added in this project (Firefox and VoiceOver) but also for what the components implemented previously (Chrome and NVDA) because those components have not been heavily used.