Accessibility Report

Accessibility testing of Thunderbird Desktop with participants from Fable.

Collaborators:
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Executive Summary

WHAT WE DID

Our Design team ran moderated interviews with a11y testers from Fable who represented diverse needs and used a range of assistive technologies.

WHAT WE LEARNED

From this research we identified and prioritized 41 bugs from the research.

WHAT'S NEXT

We'll be following up with our developers soon to work on an action plan for the findings.

Study Design

METHOD

- Recruitment & hosting through Fable
- 60 minute interviews
- Remote / Moderated

TIMING

- May through June 2025

STUDY GOALS

1. Evaluate Thunderbird accessibility for diverse users using assistive tech across core email tasks.
2. Identify barriers, assess usability, and gather feedback to improve interface clarity and efficiency.

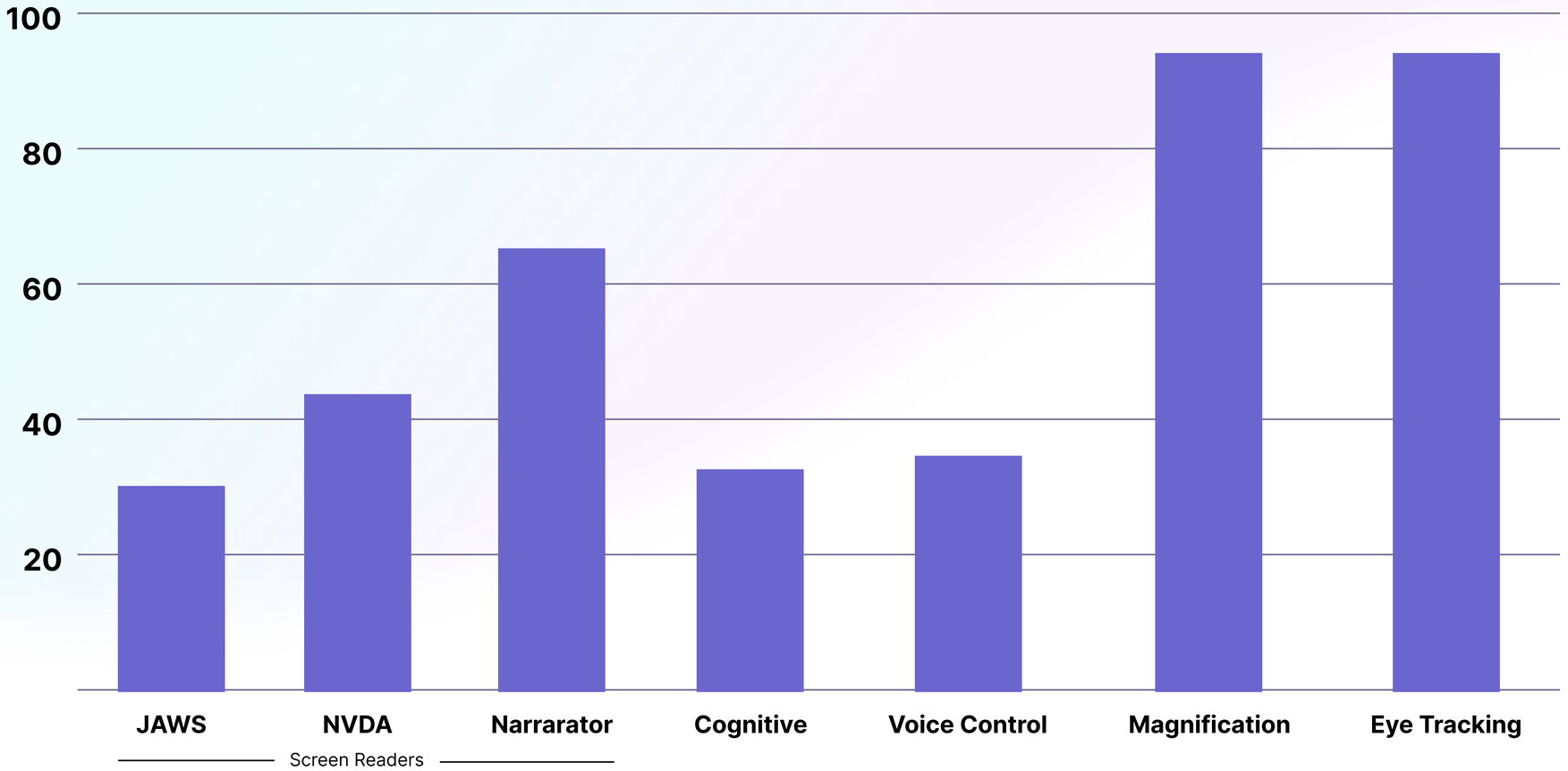
Study Design

PARTICIPANTS

- 7 participants (3 screen reader users, 2 alt. nav. users, 1 magnification software user, 1 user in a cognitive spectrum)
- Users often layer accessibility tools together, relying on each to fill gaps the others can’t.
  - All screen reader participants use multiple screen readers:
    ” If you need more complex features, it is always good to have multiple installed at all times. Easy to switch screen readers but you can’t really run them together.” - Participant 5
  - Some participants use multiple tools:
    “ I use magnification embedded on Windows on my desktop. If i can see it, I use my mouse after zooming in. I also use my screen reader at the same time.” - Participant 4

Fable Scoring

ACCESSIBLE USABILITY SCALE (AUS)



Screen Readers

A11Y OVERVIEW

Screen readers are software that convert on-screen interactions into speech or Braille.

Screen readers are primarily used by people who are blind or have low vision, helping them navigate and access digital content.

Screen Readers

COMMON ISSUES ACROSS SCREEN READERS

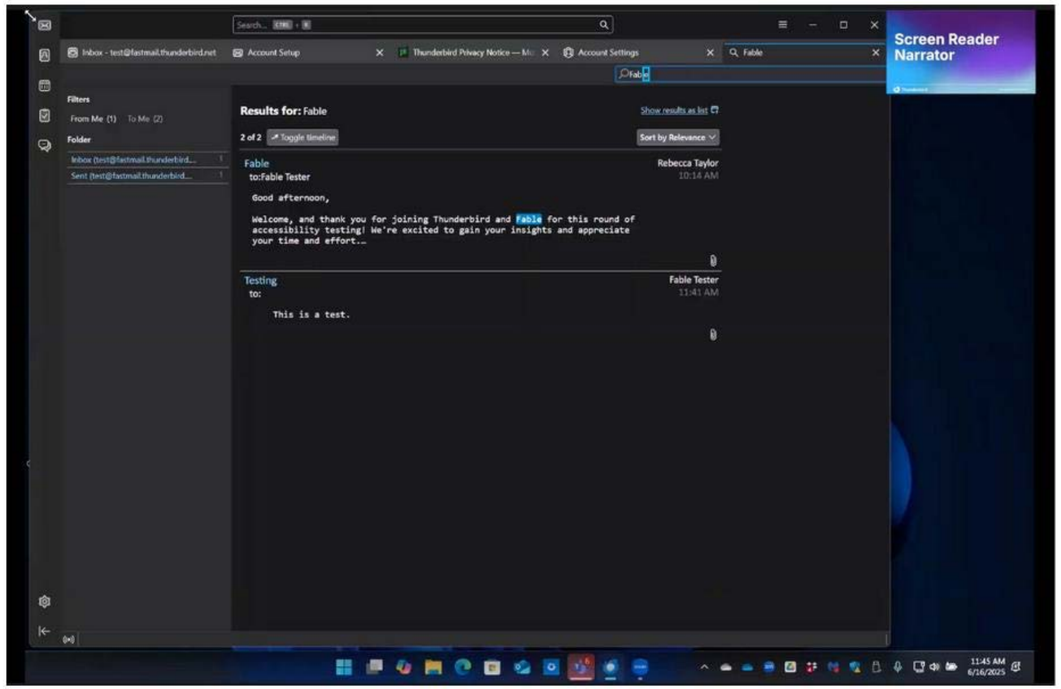
- Keyboard shortcuts must follow common norms; Escape should consistently exit or backtrack.
- Search flow is disorienting; Enter traps focus in the field instead of showing results.
- Semantic labels are missing, making results hard to interpret with screen readers.
- Complex filters are read off before results, disrupting expected task flow.
- Table views with ARIA labels would improve clarity.

> *I switch between my three screen readers depending on my needs. […] Easy to switch screen readers but you can’t really run them together.*

Screen Readers

NARRATOR

- Reading pane default disrupts screen reader navigation flow.
- Missing confirmation feedback for actions like checking boxes or moving messages.
- Submenu bug discovered: Screen reader failed to recognize menu state changes (enabled/disabled).



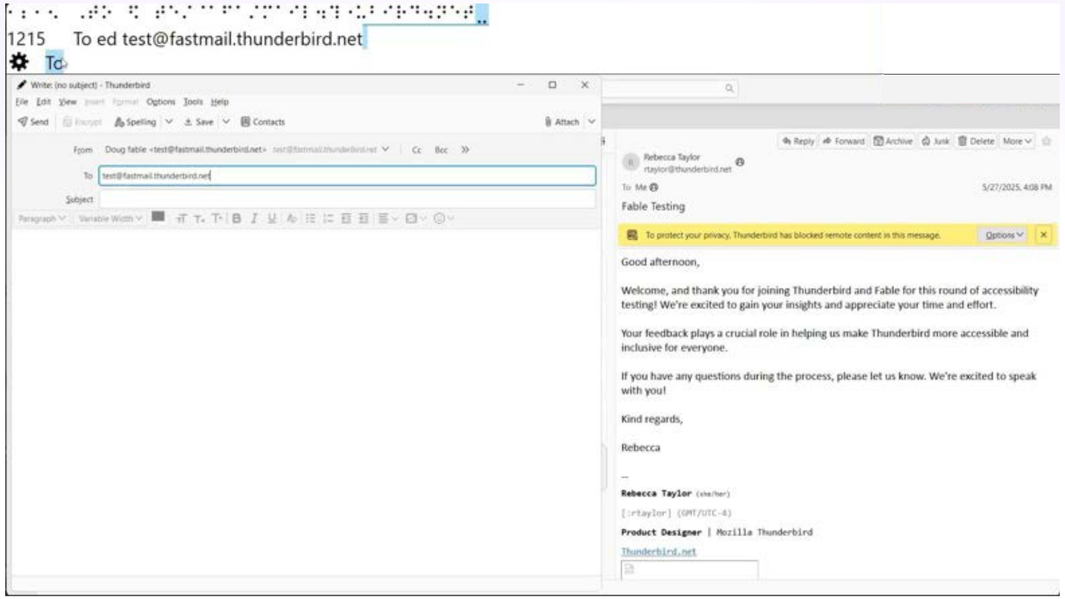
Screen readers require semantic labeling to clearly identify the focused element and available actions, but we found objects missing this context like this Edit search toolbar.

Label

Screen Readers

JAWS

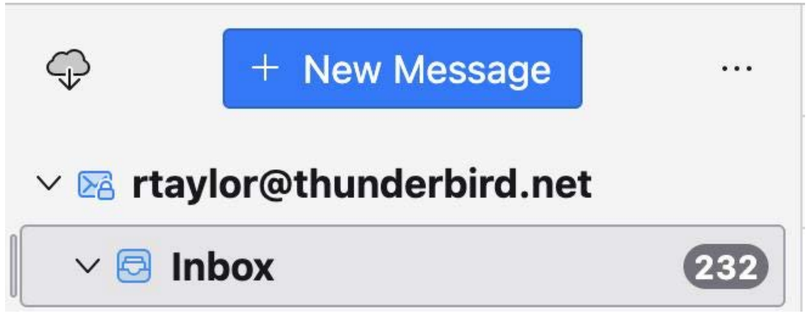
- Message body unreadable in email and compose windows with braille display.
- Panes challenging Lacks keyboard controls; suggested left/right pane navigation.
- Checkbox feedback unclear: Revisiting checkboxes may read a blank line instead of the state.
- Bug found on filters: Menu opened silently—no content or state announced to user.



Screen Readers

NVDA

- Confusing menu structures,
- Especially for folder creation and subfolder selection. Users expect more intuitive, contextual locations.
- Subfolder tree labeling is unclear and confusing.
- Poor content prioritization: Non-essential actions (e.g., Get Messages, New Message) are read first, causing distraction.



Cognitive

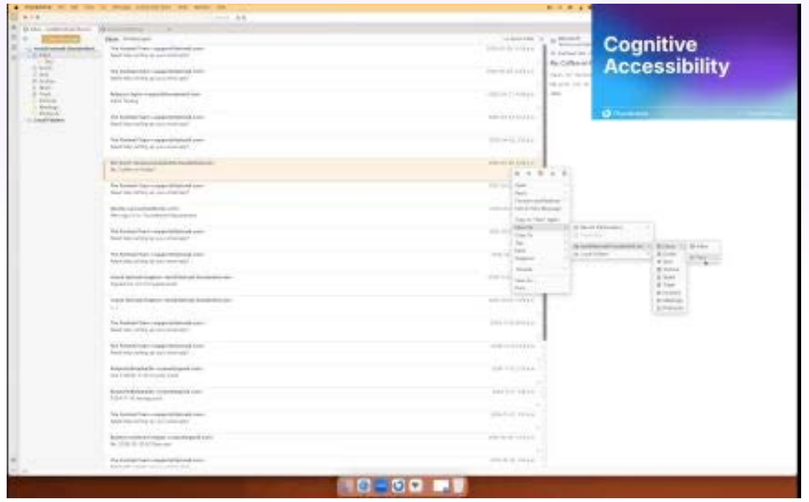
A11Y OVERVIEW

Cognition refers to how people think, learn, understand, remember, and pay attention.
Reducing barriers to these mental processes processes makes tasks and information easier to manage.
It is especially important for people with ADHD, dyslexia, autism, intellectual disabilities, memory challenges, or brain injuries.
Clear language, consistent layouts, and helpful reminders improve cognitive usability.

Cognitive

EXECUTIVE FUNCTIONING & FOCUS

- Wanted quick setup, non-technical option
- Font size and imbalance of whitespace.
- Layout controls could be unpredictable, like panes snapping
- Some search filter labels were unclear: “To me / From me” caused confusion.
- Preference for folder creation to feel contextual and spatially grounded.
- Attachment button placement raised concerns about accidental misuse due to nonstandard positioning.



Cognitive barriers arose when discussing unintuitive logic and design choices like excessive white space.

Voice Control

A11Y OVERVIEW

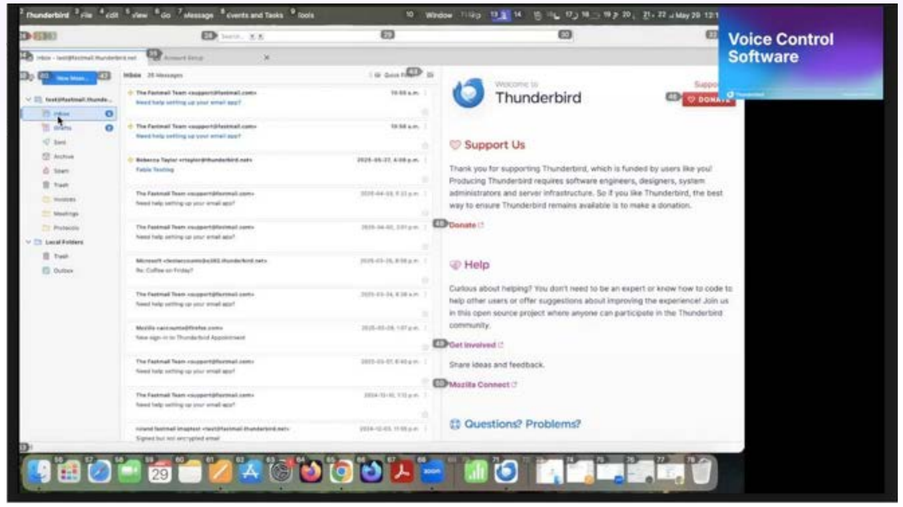
Voice Control tools let users navigate and control devices with spoken commands.

These are commonly used by people with limited mobility or dexterity.

Voice Control

KEY FINDINGS

- Improve labeling for menu actions and email selection.
- Prevent autofocus shift when scrolling through emails. Scrolling within email panes is difficult via voice.
- Font size is too small for comfortable voice-driven use.
- Dictation support needs investigation due to problems activating macOS Voice Control in Compose window.



Voice Control software displays a numbered overlay so the users can speak commands to select objects on the screen.

Magnification

A11Y OVERVIEW

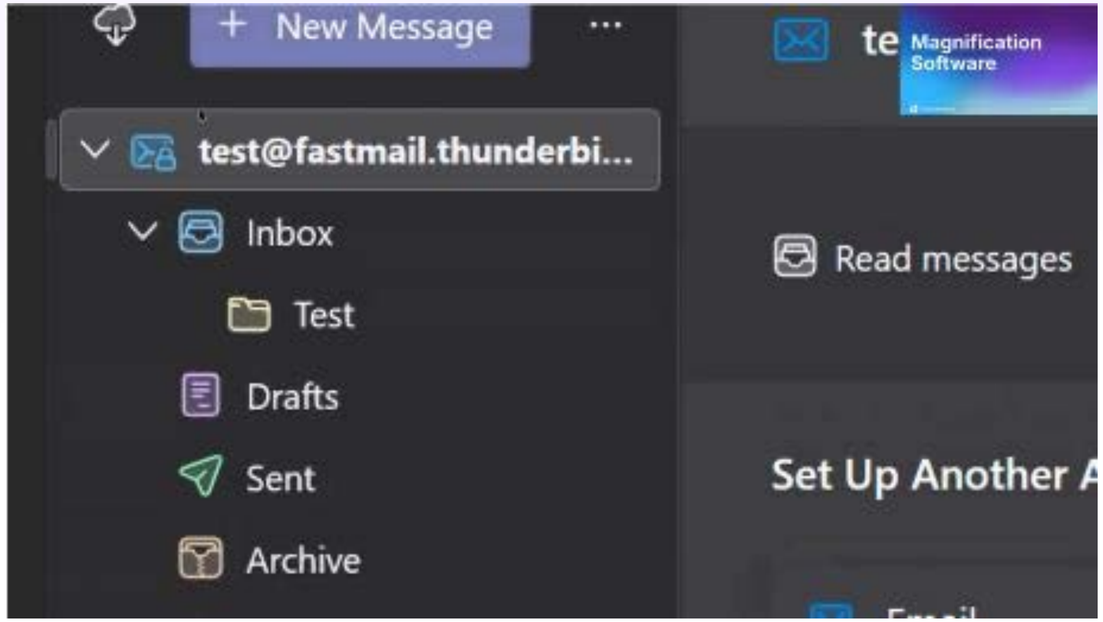
Magnification software or built-in features allow users to enlarge on-screen content.

This supports users with low vision who need larger text, icons, and visuals so they can interact effectively.

Magnification

KEY FINDINGS

- Improve visual contrast for unread indicators, buttons, and focus highlights.
- Pane layout (right vs. bottom) disrupts natural scrolling for magnification users.
- Ensure focus snaps to new messages to prevent off-screen elements.
- Clarify folder paths and hierarchy from message view.
- Stabilize cascading menus with hover delay or keypress lock to prevent accidental closure.



Magnification software and features make text and objects easier to see by enlarging them. The image above is a full screen display.

Eye Tracking

A11Y OVERVIEW

Eye Tracking software allows users to control a computer or device with their eyes

This is often used by people who cannot use traditional input methods due to limited mobility, paralysis, or other motor impairments.

Eye Tracking

KEY FINDINGS

- Compose in new window disrupted user workflow and focus.
- Font size settings inconsistent; should apply to both UI and email content.
- Small controls (e.g., close button) are difficult to target with eye tracking.
- Drag-and-drop bug: Folder animation displayed correct movement, but email did not move where expected.

Bottom of screen shows control interface for eye tracking software, showing available actions.

Conclusion

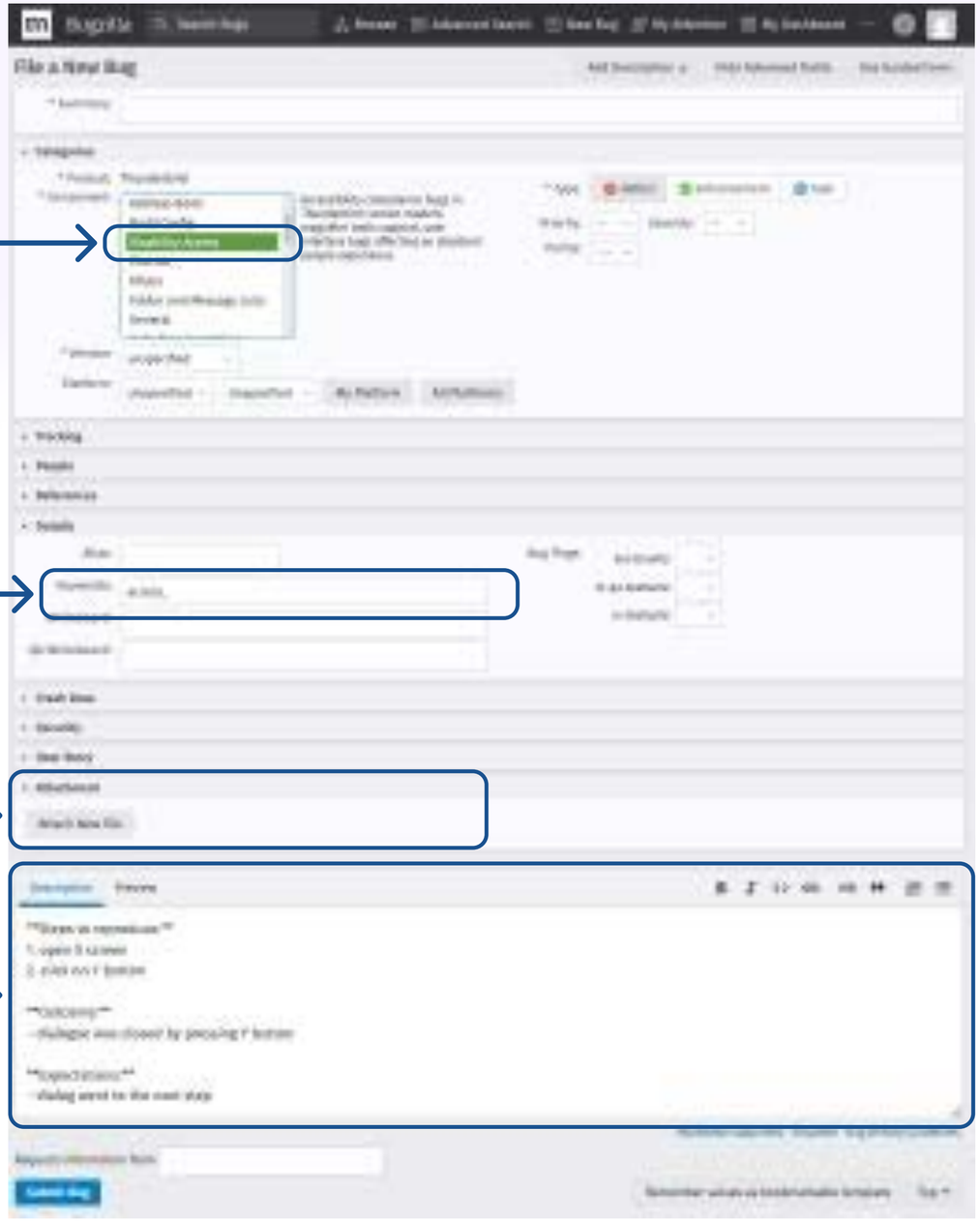
- We want to thank our partners at Mozilla for providing support and helping us get started with accessibility research and to Fable for providing a great tool for sourcing and facilitating these interviews.
- We learned so much from our Fable participants during these sessions and are so grateful to them for taking the time to share their perspectives and concerns.
- This was only the beginning and we can’t wait to do more research on Android and deeper investigations into our issues.

“If we make something a11y now, we don’ t have to come back later and redo all this work. This makes us save time.” – *Tregg Frank, Divinate*

How to help

HOW TO REPORT AN A11Y BUG

- Select the Component for **Disability Access**.
- Enter **access** into the Details section Keywords when filing your bug report.
- Add **screenshots**, if any to provide context as to when something failed
- Enter **details** into the Description that will help reproduce the issue and understand the context.



How to help

HOW TO FIND A11Y BUGS

From Bugzilla:

- Combined search for keyword **access** and component **Disability Access**: [https://mzl.la/41jrnuv]

Other:

- Check out our **Thunderbird a11y** chat [https://matrix.to/#/#tb-a11y:mozilla.org]
- Join our Thunderbird User Experience topicbox

Resources

- Bugzilla
  - Filtered for combined keyword and component search result
- Fable
- Thunderbird A11y Matrix channel
- Thunderbird User Experience topicbox
- Thunderbird suggested tools and resources for Accessibility
- Config 2024: Pitching accessible design like a pro | Figma Featuring: Tregg Frank, Co-founder & Designer, Divinate