Clipit: An Intelligent Clipboard Manager for Programmers

CSC 510 - Apr 7 Presentation

Group G

Research Questions

- Programmers copy and paste a lot
    - Some research says this is bad
- But research shows we do it A LOT
    - So our approach is to design around what makes this bad

Clipboard History Managers

- This approach facilitates better copying and pasting
- But there aren't many focused at programmers
- We can make them better!

Our Approach

- Atom
- Atom is cool
- There was already a good base open version

Base Version, aka Clipit

Coffeescript

```coffeescript
class ClipboardHistoryView extends SelectListView

  editor: null
  forceClear: false

  # Public methods
  ###########################
  initialize: (@history, @editorView) ->
    super
    @addClass('overlay clipboard-history from-bottom')
    {@editor} = @editorView
    @_handleEvents()

  copy: ->
    @forceClear = false
    if @editorView.active
      selectedText = @editor.getSelectedText()
      if selectedText.length > 0
        @_add selectedText

  paste: ->
    # Check OS clipboard
    clipboardItem = atom.clipboard.read()
    if clipboardItem.length > 0 and not @forceClear
      exists = false
      for item in @history
        if item.text is clipboardItem
          exists = true

      if not exists
        @_add clipboardItem

    # Attach to view
    if @history.length > 0
      @setMaxItems(15)
```

How can we make this BETTER

Our approach to adding functionalities to the base version

Clipit-order

Our approach here

What it does

What we specced it to do

Pros/cons

What we hoped this would accomplish best

Clipit-panel

Our approach here

What it does

What we specced it to do

Pros/cons

What we hoped this would accomplish best

Clipit-cmd

Our approach here

What it does

What we specced it to do

Pros/cons

What we hoped this would accomplish best

Experimental Design

Telemetry

Task Methodology

Participants

Experiment in practice

- Telemetry only worked for one set of tests, etc.

Example Tasks

Paste example tasks here

Results

Pretty pictures

Discuss overall results trends

Table of average total task completion times

Post Survey Results

More qualitative feedback here

Start discussing what we saw rather than just what the data shows

Best Feature

What we have defined as "best"

- Most efficient (total avg time) and user satisfaction (post survey stuff)
- Comments from users!

Clipit-cmd

Future Work

Clipit-cmd

- Add a visual component

Clipit-order

- Contextual sorting based on contents
- Favorite items

Clipit-panel

- Formatting issues

Rerun experiments

- Change up some of the task design
- Be Agile!