STORYBOOK PSEUDO STATE ADD-ON

WEB WORKER SAAR MEETUP

05.03.2020

ERGOSIGN

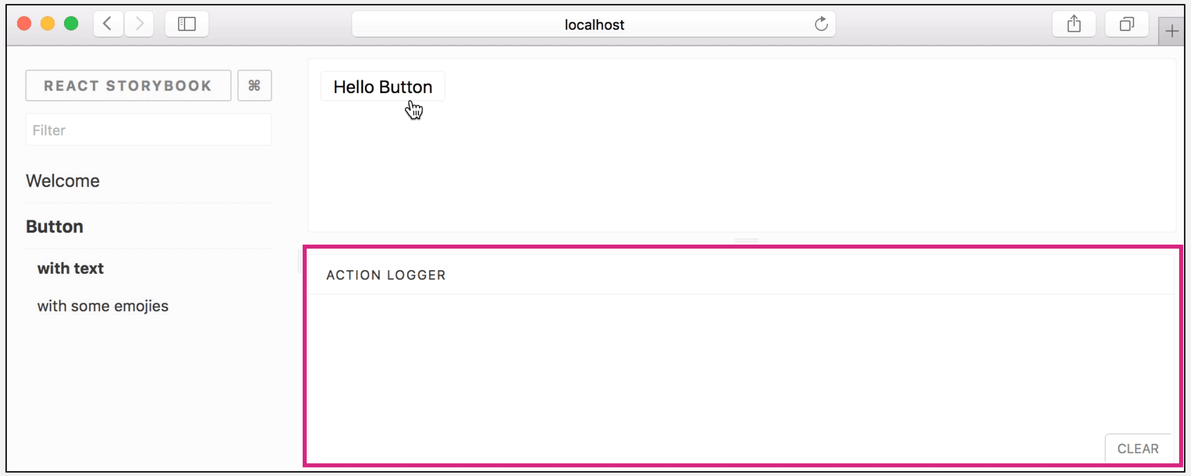
AGENDA

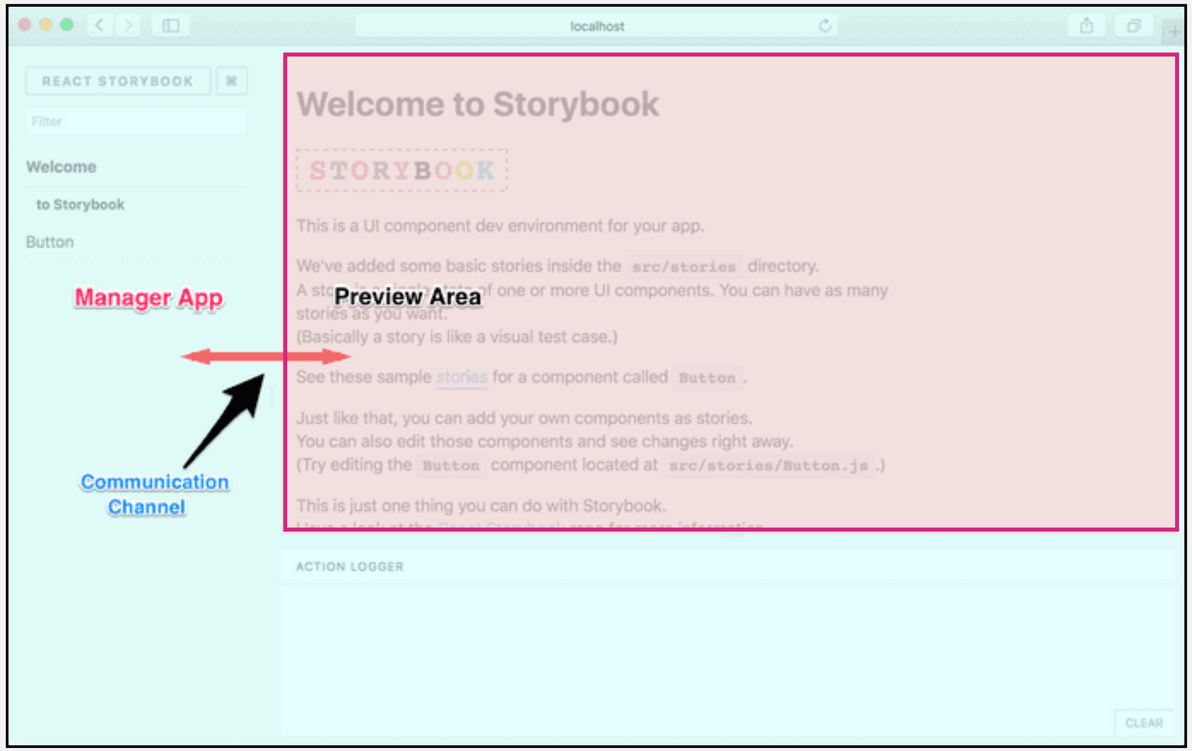
- Introduction
- Storybook Add-on in General
- Pseudo States Add-on
  - Requirements
  - Motivation
- UX Library
- Storybook Add-on
- Technical Challenges
- Example

PHILIPP SCHARDT

- B.Sc. und M.Sc. Medieninformatik, Universität des Saarlandes
- Seit 2017 UX Software Engineer bei Ergosign
- Seit 2019 Technology Expert Web bei Ergosign

+ Angular
+ Typescript
+ Web Components





STORYBOOK ADD-ONS

CAPABILITIES

- **Panel** (like Action Logger)
- **Tool** (like Zoom or Grid)
- **Tab** (like Notes)
- **Preview** (like Viewport)

- Interact/communicate with the preview/manager
- Interact/communicate with other add-ons
- Change storybook's state using it's APIs
- Navigating

- Addon Gallery

```
const styles = {
  textAlign: 'center',
};
const Center = ({ children }) =>
    <div style={styles}>{children}</div>;

// Story:
export default {
  title: 'Button',
};

export const defaultView = () => (
  <Center>
    <Button>Hello Button</Button>
  </Center>
);
```

STORYBOOK ADD-ONS

USAGE

- **Components that wrap a story**
- Decorators = wrapper component
- Native add-ons use Storybook as a platform and interact with it

- Documentation

```
import Button from './button';
import Center from './center';

export default {
  title: 'Button',
  decorators: [storyFn =>
      <Center>{storyFn()}</Center>]
};

export const defaultView = () => (
  <Button>Hello Button</Button>
);
```

STORYBOOK ADD-ONS

USAGE

- Components that wrap a story
- **Decorators** = wrapper component
- Native add-ons use Storybook as a platform and interact with it

- Documentation

PSEUDO STATES ADD-ON

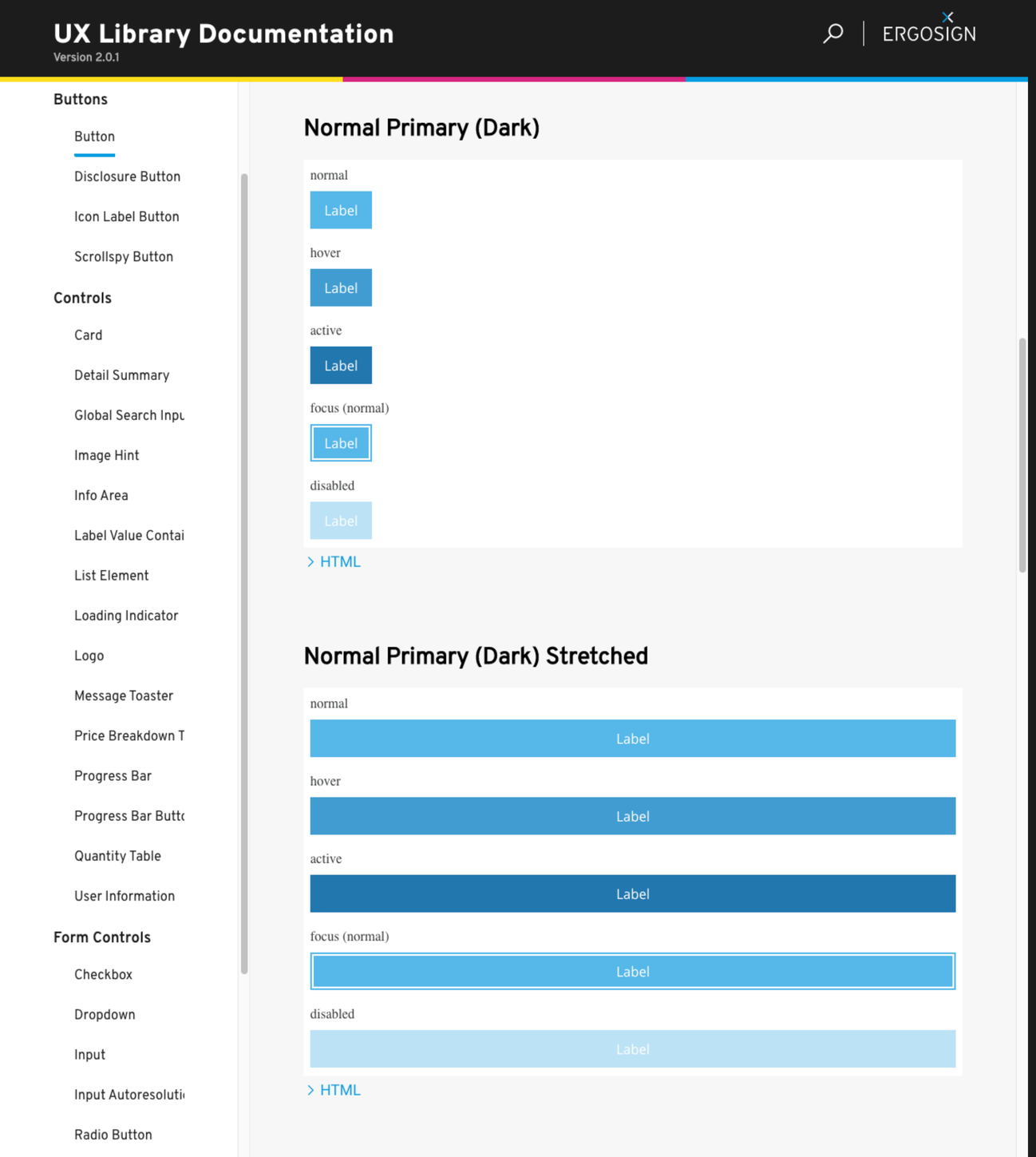
REQUIREMENTS

- Visualise **CSS Pseudo States**
  - :hover, :focus, :active
- Visualise **HTML Attributes**
  - :disabled, :readonly, :checked
- Visualise **Properties** / **Custom Attributes**
  - error, selected, open

PSEUDO STATES ADD-ON

MOTIVATION

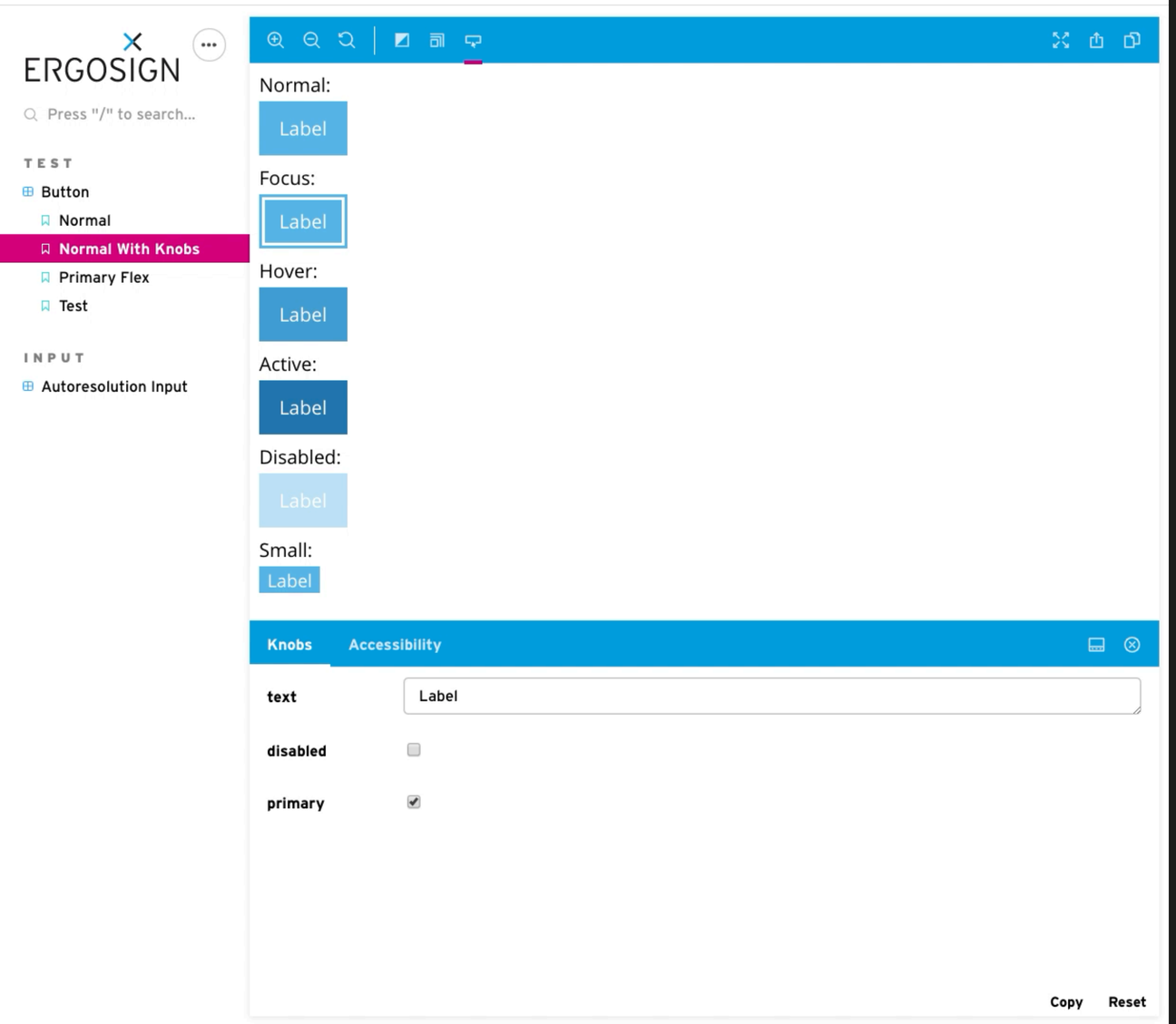
- Increase Developer Experience (DX)
  - Show style permutations of components
- Connect design and development
  - Design Review
- Quality Improvement & Documentation
  - “Visual Unit Test”
- Framework agnostic



UX LIBRARY

BACKGROUND STORY

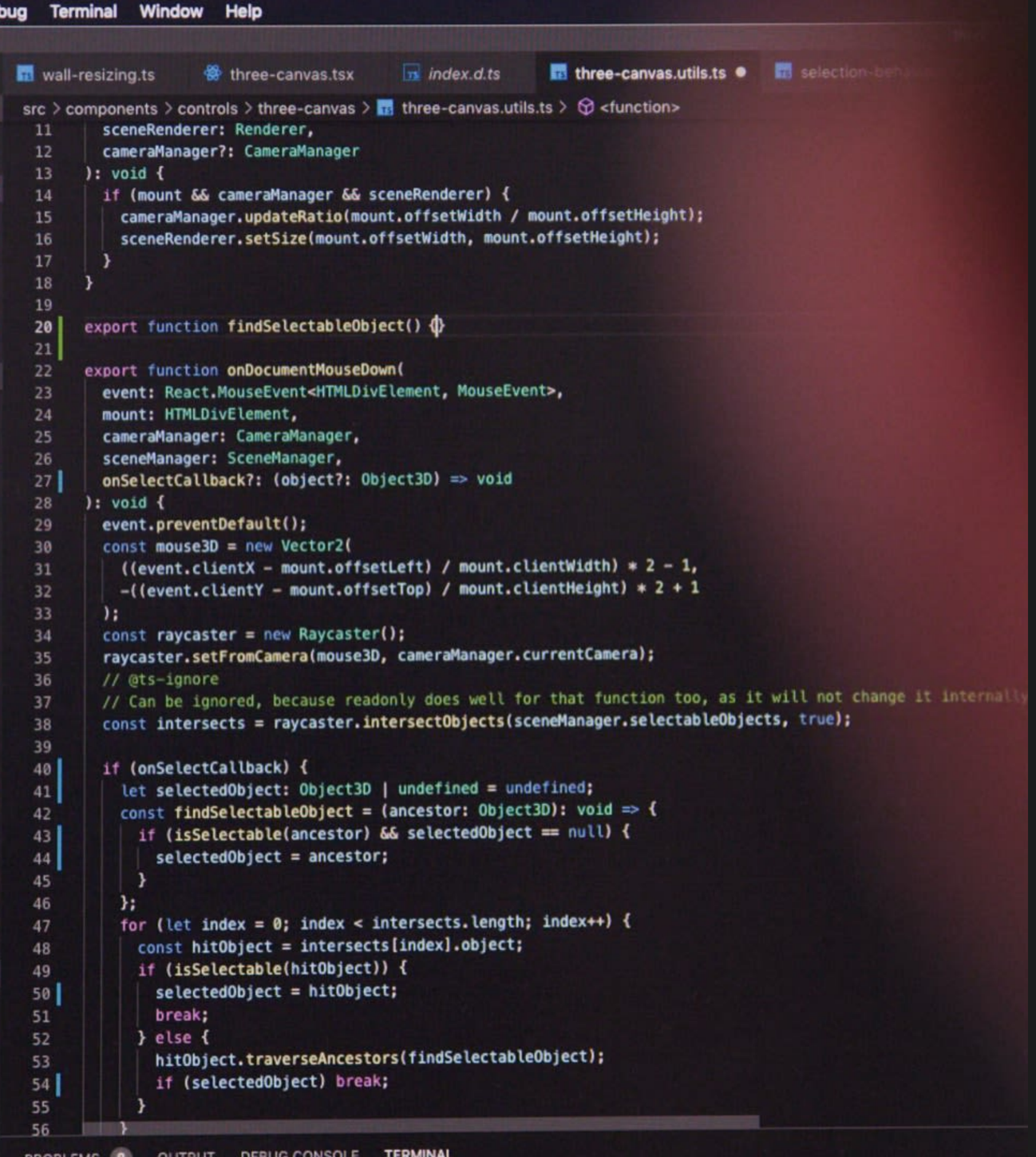
- Storybook like solution by Ergosign (Github Repo)
- Generate components automatically
- SASS Comment || JSDoc Comment
  - Parsed + Assembled
- Limitations
  - Only Plain HTML, AngularJs, Angular+
  - New “Story” for each property
  - Manual generation of pseudo-styling
    `:active, .active-pseudo {…}`
  - Hard to set up complex examples
    - Reactive forms, example data (objects, arrays)
  - Maintenance overhead



PSEUDO STATES ADD-ON

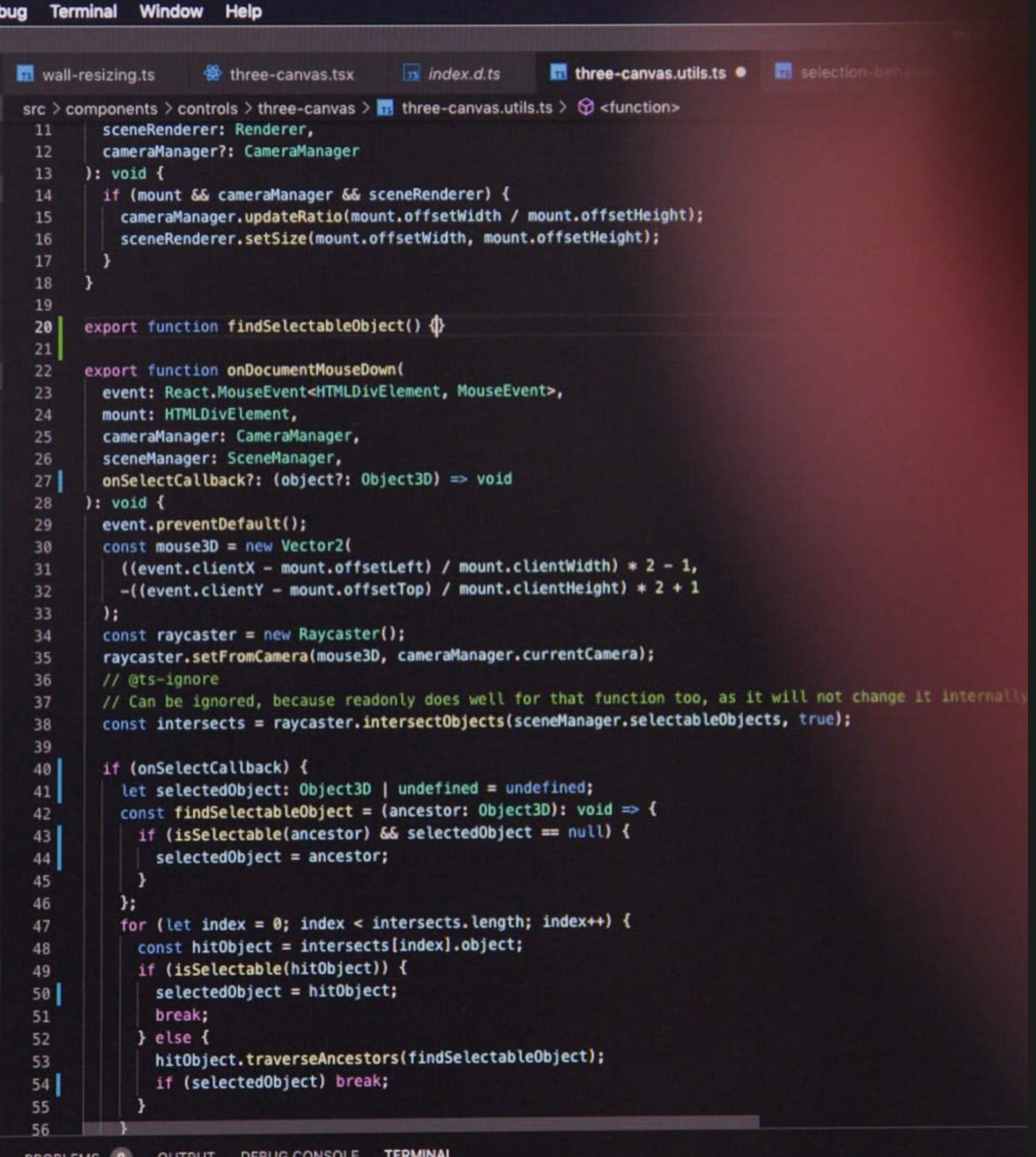
V0.0.1-ALPHA.19

- Open Source (Github Repo)
- Extends Storybook functionality
  - Decorator to extend story (withPseudo)
  - Show/Hide States (Toolbar Button)
- Frameworks
  - Angular
  - React
  - Vue
  - HTML
  - Web Components (Lit-HTML)



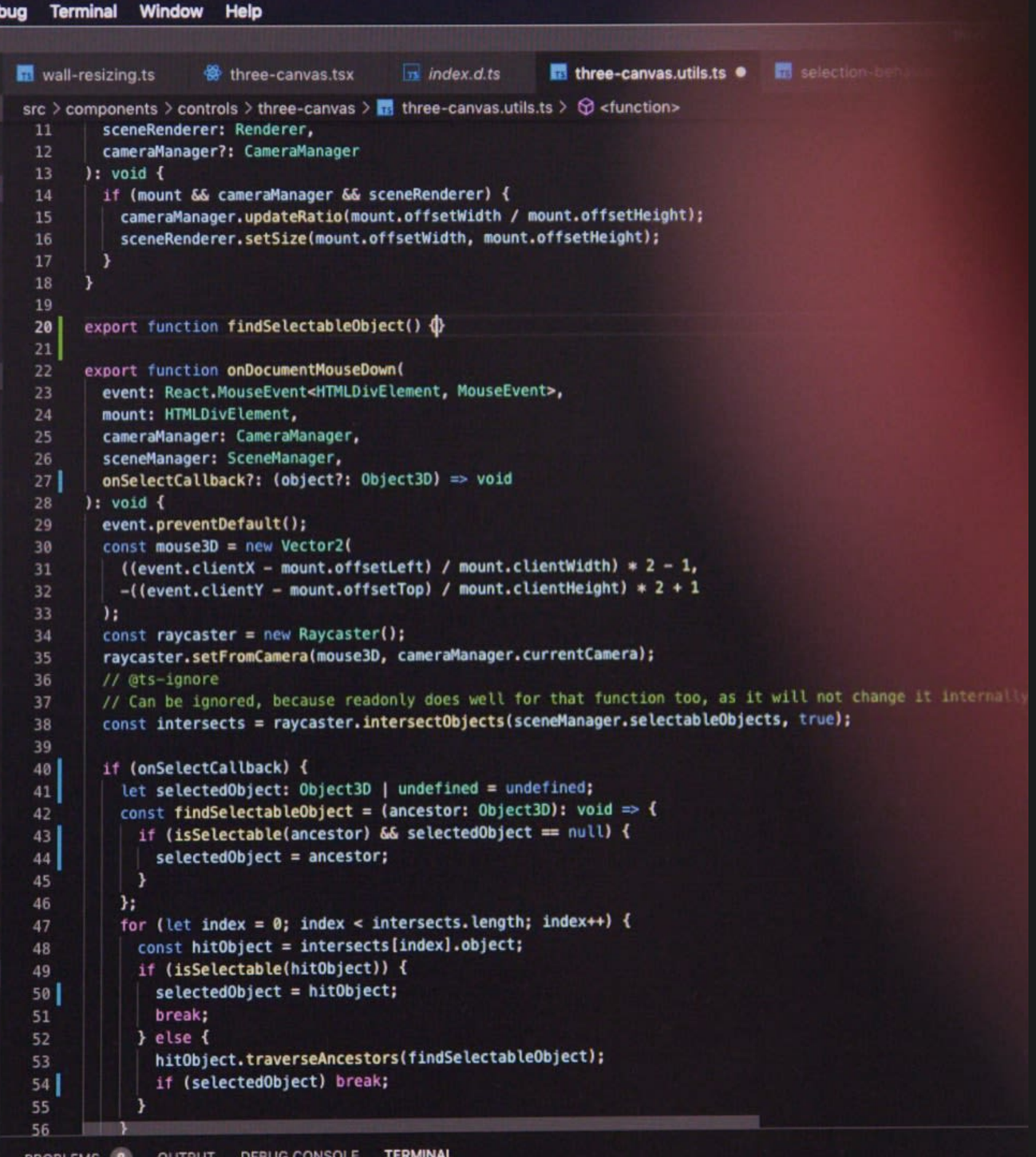
TECHNICAL CHALLENGES

- Support different frameworks
  - Mono Repo (Lerna)
  - NPM Package for each framework
  - Shared code base (types, interfaces)
- Display story multiple times independently
  - Framework dependent
- Share Show/Hide-State across stories
  - ToggleButton (`Type.Tool`)
  - Session Storage vs `useAddonState()` Hook (Issue)
  - Channel Communication: Tool <–> Decorator/Story



TECHNICAL CHALLENGES

- Force component to be in html state (focus, hover, active)
  - Automatically generated pseudo styling
    - PostCSS
    - PostCSS Pseudo Classes Plugin
    - Preset (extends webpack' sass rule: postcss-loader)
  - Add generated styling class to component story
    - Scoped component styling (css-modules, View-Encapsulation, shadow-dom, Scoped CSS)
    - Find element with interaction styling (selection)
    - Add class after story is rendered



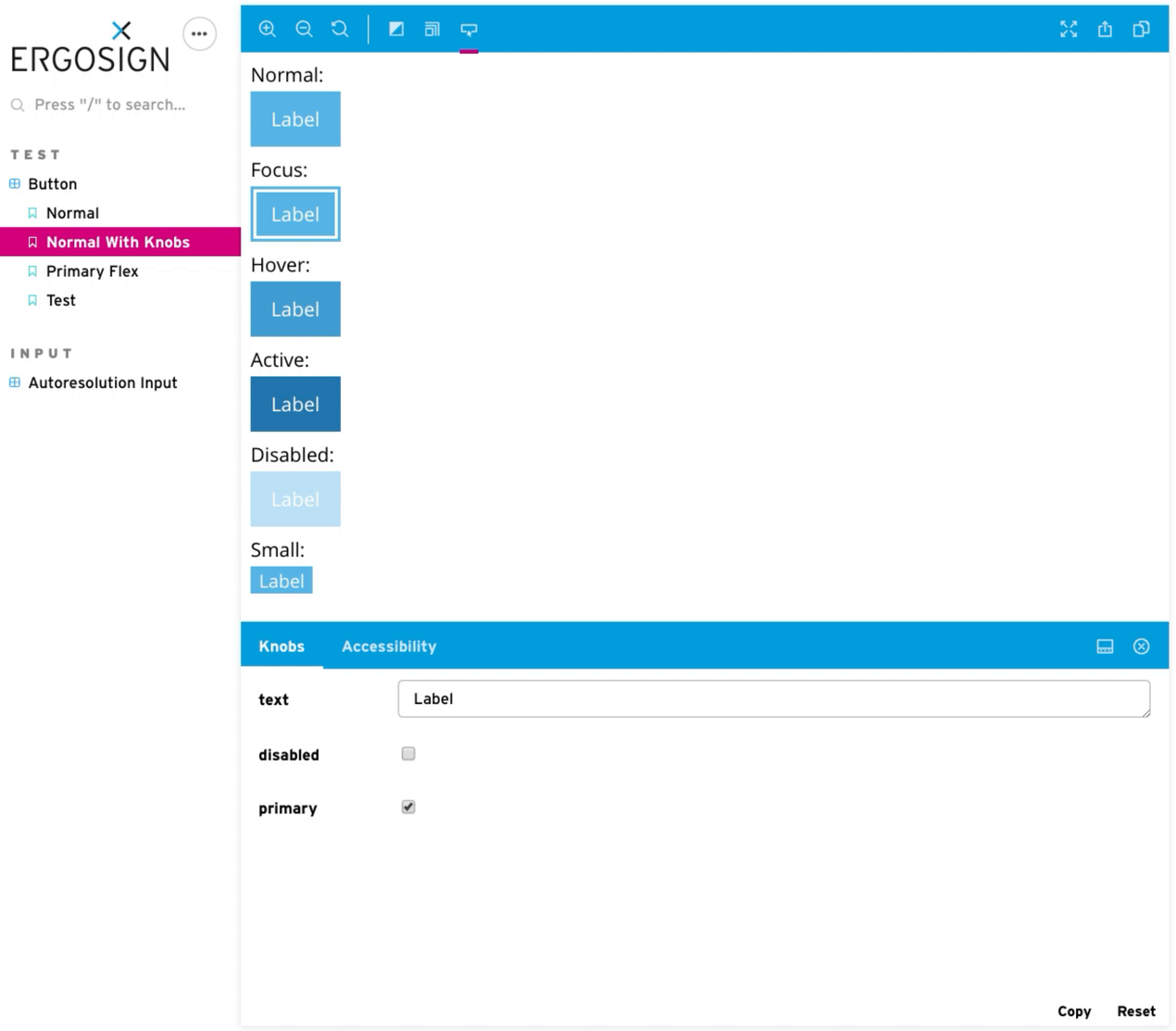
TECHNICAL CHALLENGES

- Force property of component to be enabled
  - Angular's change detection
  - Only access to story representation of component
  - In React:

```
const alteredStory = {
    ...story,
    props: {
        ...story.props,
        [property]: true
    },
};
```

- Testing

EXAMPLE




```
export default section = {
  component: ButtonComponent,
  title: "Test|Button",
  moduleMetadata: {
    declarations: [ButtonComponent],
    imports: [CommonModule]
  },
  decorators: [
    withPseudo
  ],
  parameters: {
    withPseudo: {
      selector: 'button',
      pseudos: PseudoStatesDefault,
      attributes: ['disabled', 'small']
  }}};

export const Normal = () => {...};
```

THANK YOU!

ERGOSIGN

BERLIN HAMBURG MÜNCHEN **SAARBRÜCKEN** STUTTGART ZÜRICH