Building Accessible Apps with .NET MAUI

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https://aka.ms/discord-maui > #maui-accessibility

The Case for Accessibility

- Over 1 billion people currently experience some form of disability
- Designing for accessibility is not limited to people experiencing disabilities – the best solutions benefit everyone
  - Voice assistants on GPS
  - Closed captioning on videos
  - Raise hand feature on Microsoft Teams
  - Dark mode on devices
  - Dropped curbs on sidewalks and driveways
- Huge business opportunity – hundreds of billions
- Growing number of legal consequences

Approaching Accessible Apps

- Web Content Accessibility Guidelines (WCAG)
  - Global accessibility standard and legal benchmark for both web and mobile
  - 4 principles

Perceivable

Information and user interface components must be presentable to users in ways they can perceive.

- Text alternatives
- Time-based media
- Adaptable
- Distinguishable

Operable

User interface components and navigation must be operable.

- Keyboard accessible
- Time limits
- Seizures and physical reactions
- Navigable
- Input modalities

Understandable

Information and the operation of user interface must be understandable.

- Readable
- Predictable
- Input assistance

Robust

Content must be robust enough that it can be interpreted by ...assistive technologies.

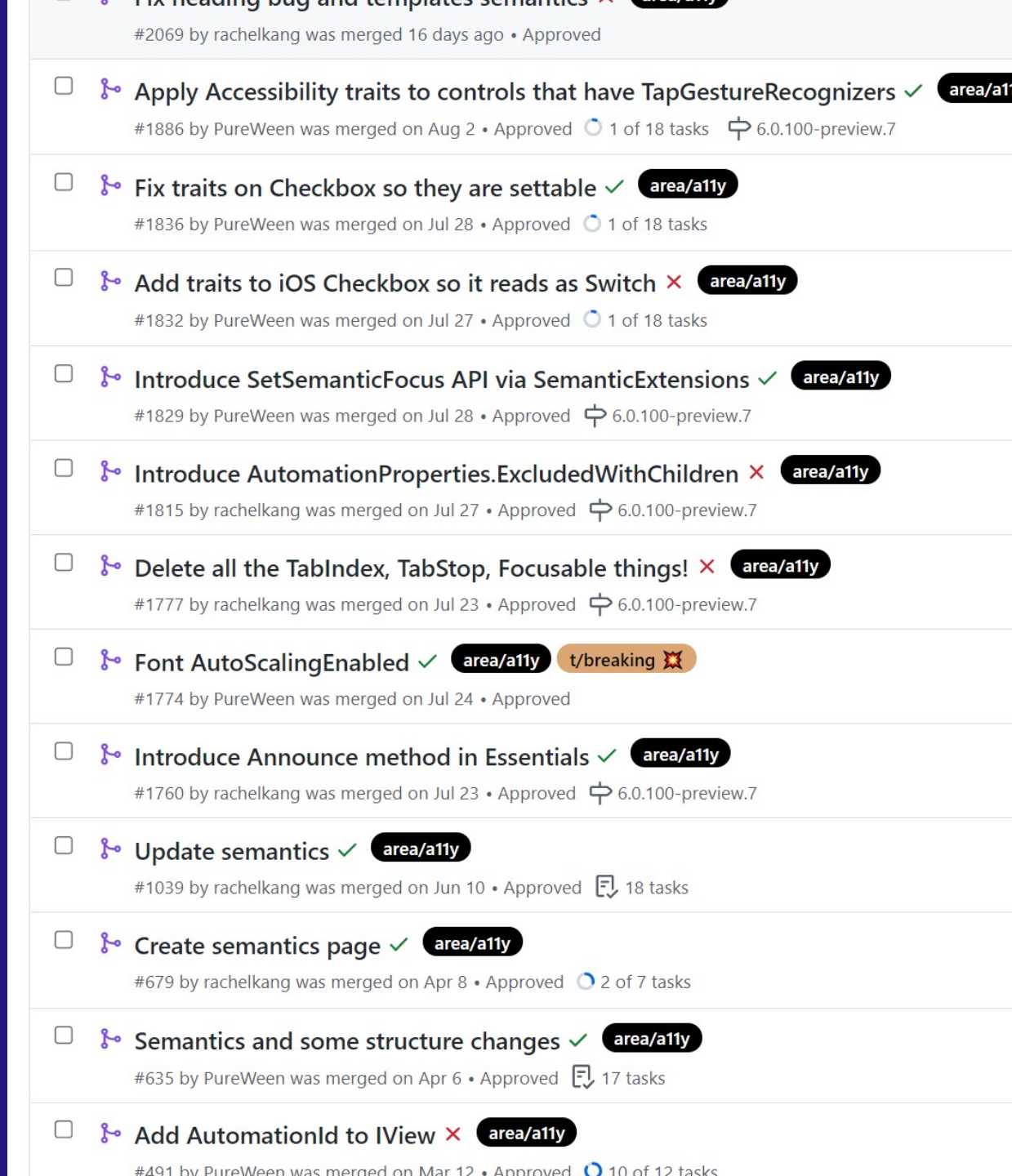
- Compatible

https://www.w3.org/WAI/standards-guidelines/wcag/

Approaching Accessible Apps

- **Empathy** is the name of the game
- Explore accessibility settings and features
  - Screen readers
    - TalkBack on Android
    - VoiceOver on iOS
    - Narrator on UWP
- Research accessibility models and APIs
- Test and leverage available tools/resources

With .NET MAUI, you'll be able to create accessible apps more seamlessly than ever before

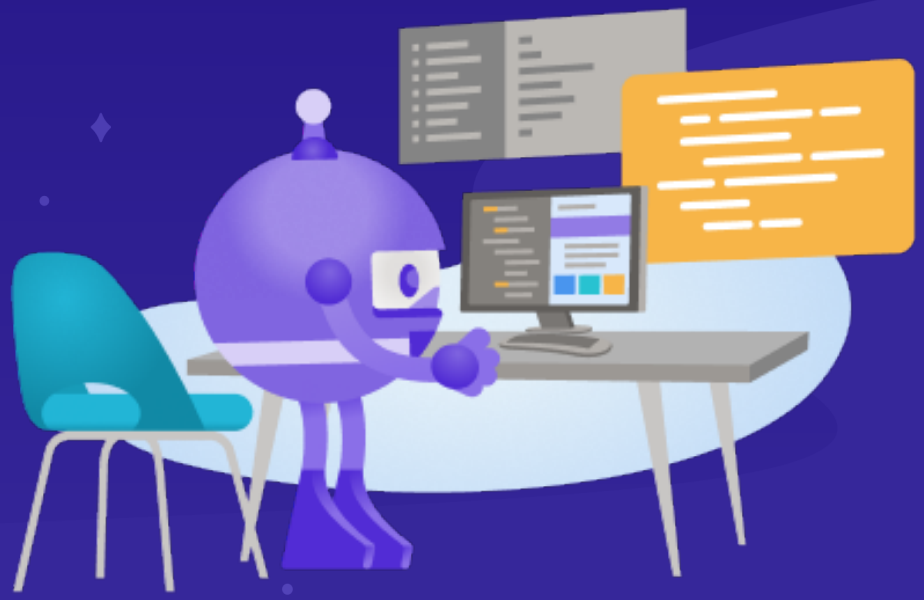


Accessibility in .NET MAUI

- SemanticProperties (new)
  - `SemanticProperties.Description`
  - `SemanticProperties.Hint`
  - `SemanticProperties.HeadingLevel`
- SemanticExtensions (new)
  - `SetSemanticFocus`
  - `UpdateSemantics / UpdateSemanticNodeInfo`
- SemanticScreenReader (new)
  - `SemanticScreenReader.Announce`
- AutomationProperties (from Xamarin.Forms)
  - `AutomationProperties.ExcludeWithChildren`

Accessibility in .NET MAUI

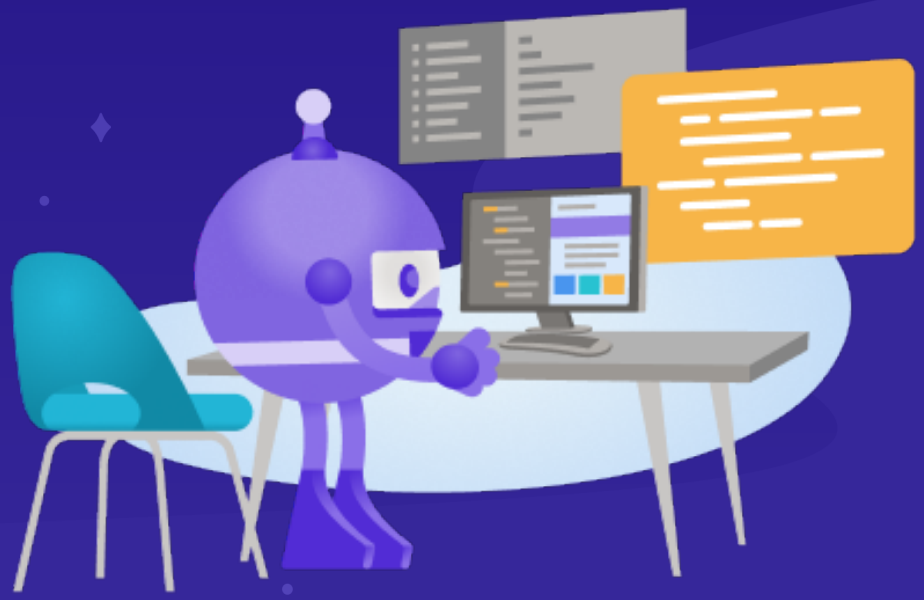
- Fonts
  - Scales with device settings on Android *and* iOS
  - `FontAutoScalingEnabled` property
- Checkbox
  - iOS accessibility as a Switch
- Removed `TabIndex / TabStop`
- Accessibility validation
  - Recipes app
- Constantly looking for ways to improve



Demo time!

Accessibility APIs in Xamarin.Forms + XCT

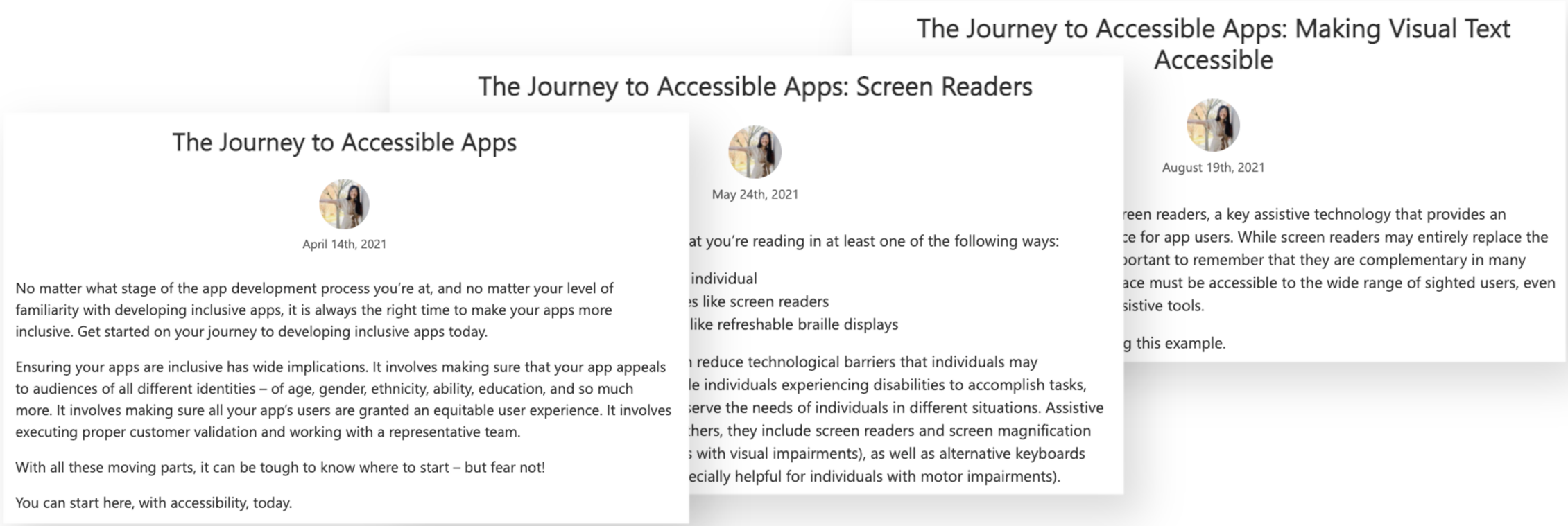
- Xamarin.Forms
  - “`Accessibility_Experimental`” flag
- Xamarin Community Toolkit
  - SemanticEffects
    - SemanticEffect.Description
    - SemanticEffect.Hint
    - SemanticEffect.SemanticInclusion
      - SemanticInclusion.Include
      - SemanticInclusion.Exclude
      - SemanticInclusion.ExcludeWithChildren
  - `SemanticOrderView`



Demo time!

Stay tuned for more!

- Accessibility blog post series https://devblogs.microsoft.com/xamarin/
- Discord https://aka.ms/discord-maui > **#maui-accessibility**



Thank you!

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