The Journey to Accessible Apps

Rachel Kang (she/her)
Software Engineer, Xamarin.Forms --> .NET MAUI

@therachelkang
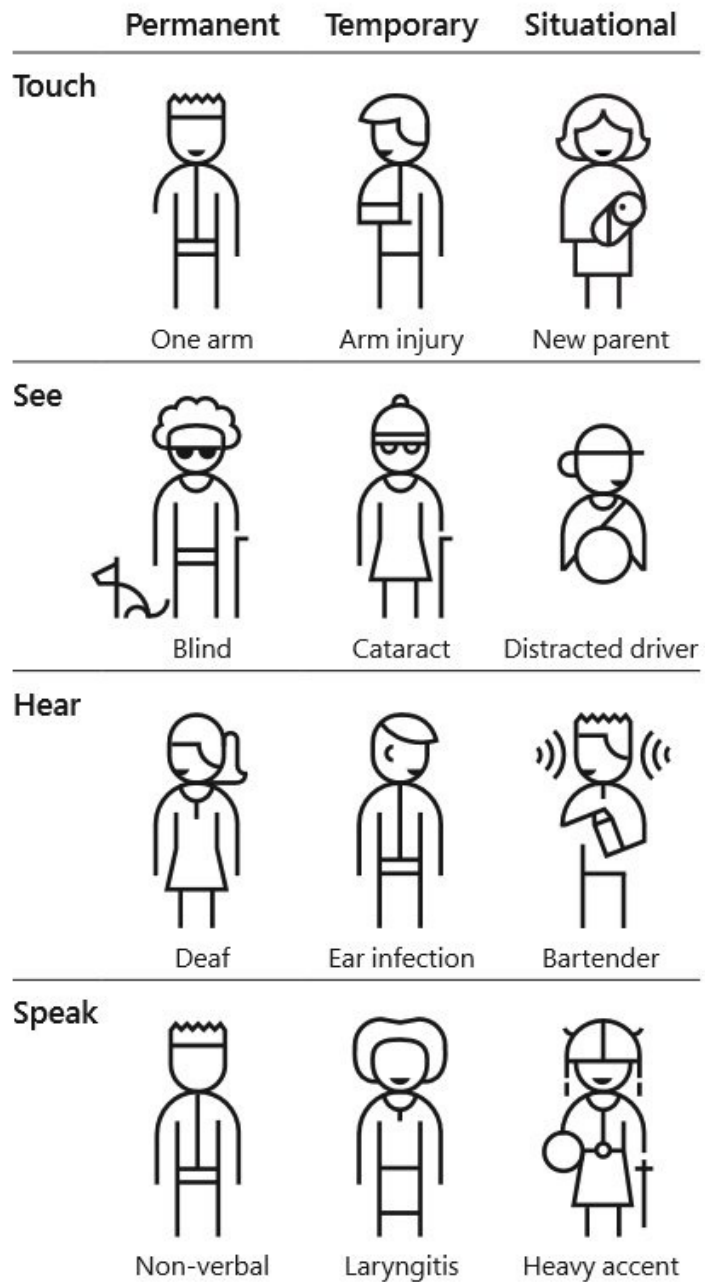@rachelkang
https://www.linkedin.com/in/rachel-j-kang

What? Why? How?

Over 1 billion people currently experience some form of disability

	Permanent	Temporary	Situational
Touch	One arm	Arm injury	New parent
See	Blind	Cataract	Distracted driver
Hear	Deaf	Ear infection	Bartender
Speak	Non-verbal	Laryngitis	Heavy accent

The Persona Spectrum

We use the Persona Spectrum to understand related mismatches and motivations across a spectrum of permanent, temporary, and situational scenarios. It's a quick tool to help foster empathy and to show how a solution scales to a broader audience.

https://www.microsoft.com/design

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
  - Closed captioning on videos
  - Raise hand feature on Microsoft Teams
  - Dark mode on devices
  - Dropped curbs on sidewalks and driveways

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- 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	Operable	Understandable	Robust
Information and user interface components must be presentable to users in ways they can perceive.	*User interface components and navigation must be operable.*	*Information and the operation of user interface must be understandable.*	*Content must be robust enough that it can be interpreted by …assistive technologies.*
• Text alternatives • Time-based media • Adaptable • Distinguishable	• Keyboard accessible • Time limits • Seizures and physical reactions • Navigable • Input modalities	• Readable • Predictable • Input assistance	• Compatible

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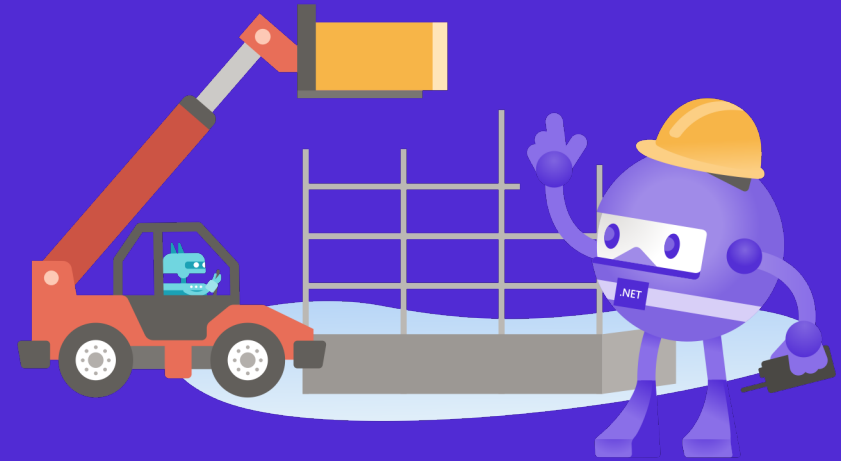
Approaching Accessible Apps

- **Empathy** is the name of the game
- Explore accessibility settings and features
  - Screen readers
    - TalkBack on Android, VoiceOver on iOS, Narrator on UWP
  - Keyboard accessibility
- Research accessibility models and APIs
- Test and leverage available tools/resources
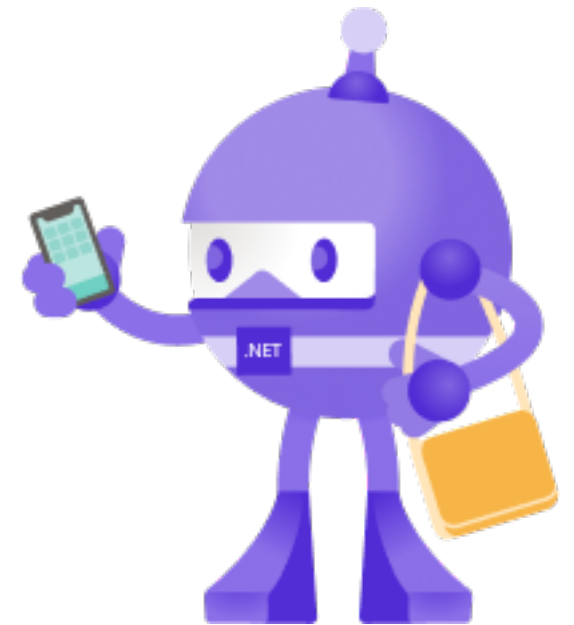
What are we doing about it?

Xamarin.Forms

- Automation properties
- TabIndex
- Custom renderers and effects

Xamarin.Forms

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- Use Xamarin.Forms 5
- Stay tuned for the AccessibilityExperimental flag
  - https://github.com/xamarin/Xamarin.Forms/pull/14089
- Check out A11yTools to explore new APIs
  - https://github.com/PureWeen/A11YTools

Looking Forward to .NET MAUI

Announcing .NET Multi-platform App UI Preview 3

David

April 9th, 2021

With .NET 6 Preview 3 we are shipping the latest progress for mobile and desktop development with .NET Multi-platform App UI. This release adds the Windows platform with WinUI 3, improves the base application and startup builder, adds native lifecycle events, and continues to add more UI controls and layout capabilities. We are also introducing new semantic properties for accessibility. As we explore each of these in a bit more detail, we invite you to `dotnet new` along with us and share your feedback.

https://devblogs.microsoft.com/dotnet/announcing-net-multi-platform-app-ui-preview-3/

Looking Forward to .NET MAUI

- SemanticProperties
  - Spec: https://github.com/dotnet/maui/issues/469
  - PR for P3: https://github.com/dotnet/maui/pull/635
  - HelloMaui sample: https://github.com/dotnet/net6-mobile-samples
- Explore new APIs with us
  - https://github.com/PureWeen/A11YTools
  - https://github.com/xamarin/XamarinCommunityToolkit/issues/1087
- Accessibility blog post series
  - https://devblogs.microsoft.com/xamarin/the-journey-to-accessible-apps/
- Let us know what you think!
  - Join our monthly accessibility panels and chat with us on GitHub, Discord, Twitter!

Thank you!

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