

Visual Behavior

Brian Lagunas

<http://brianlagunas.com>

@brianlagunas



Outline

- **Triggers**
- **VisualStateManager**
- **Triggers vs. VisualStateManager**

Triggers

- **Change appearance/behavior when values change or events are raised**
 - Must be a dependency property
- **What supports triggers?**
 - Style
 - ControlTemplate
 - DataTemplate
- **Type of Triggers**
 - Property Trigger

Property Trigger

- Set property values/start actions base on property value
- Must contain Setter objects
- Must specify both Property and Value
- EnterActions and ExitActions
- Changed values rest to original
- EventSetters not supported

Triggers

- **Change appearance/behavior when values change or events are raised**
 - Must be a dependency property
- **What**
 - Style
 - ControlTemplate
 - DataTemplate
- **Type of Triggers**
 - Property Trigger
 - EventTrigger (Style only)

EventTrigger

- Take action when event occurs
- Action will not be undone
- Be aware of your events

Triggers

- **Change appearance/behavior when values change or events are raised**
 - Must be a dependency property
- **What**
 - Style
 - ControlTemplate
 - DataTemplate
- **Type of Triggers**
 - Property Trigger
 - EventTrigger (Style only)
 - MultiTrigger
 - DataTrigger
 - MultiDataTrigger

Visual State Manager

- **Parts and States Model**
- **Manages state and logic for state transitions**
- **Requires XAML markup and code**
- **In XAML**
 - VisualStateGroup
 - VisualState
 - Storyboards
- **In Code**
 - VisualStateManager.GoToState
 - VisualStateManager.GoToElementState

Visual State Manager

- **When to update your states**

- When the ControlTemplate is applied (update state in OnApplyTemplate)
- When a property changes (update in PropertyChangedCallback)
- When an event occurs (update after event)

- **Best practices**

- Use properties to track state
- Create helper method for state transitions

- **Designers - Control Contract**

- Visual elements - TemplatePart
- States - TemplateVisualState
- Properties

Triggers vs VisualStateManager

- **Triggers**
 - XAML Markup only
 - creator of a template specifies changes to the template to be applied under certain conditions.
 - react on changes of the properties, events, surrounding controls, or application data

- **VisualStateManager**
 - communicates its visual states to control template authors
 - the creator of the **control** puts it into different visual states, and the creator of the **template** applies UI effects according to the visual state.
 - customize transitions between visual states by using VisualTransitions
 - Cross platform control development

Summary

- Triggers
- VisualStateManager
- Triggers vs. VisualStateManager