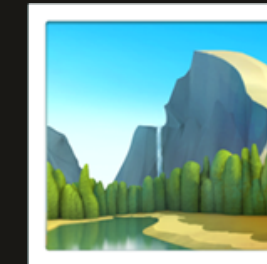
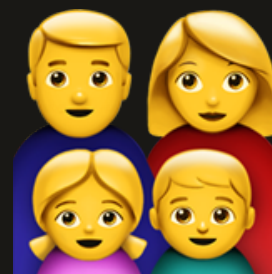


WEB COMPONENTS IN REACT?

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I ❤️ UI



Components



React



Web Components

WEB COMPONENTS

- **Custom Elements**
- **Shadow DOM**
- ES Modules
- HTML Templates

**WHY USE
WEB COMPONENTS
AT ALL?**

- **Design systems**
- **Standards-based**
- **Future proof**
- **Runtime performance**
- **Encapsulated***

THE QUESTION IS NOT
"ARE THEY READY?"

**"DO THEY INTEROP
WITH REACT?"**

KIND OF.

1. CUSTOM ELEMENT ATTRIBUTES

// String, Number, Boolean

<custom-element

message="Hello, Seattle!"

>

<custom-element

x={props.x}

y={props.y}

isCool={props.isCool}

>

2. REACT SYNTHETIC EVENTS


```
<custom-element  
  onClick={handleClick}  
>
```

3. CUSTOM ELEMENT PROPERTIES

// createRef() 🐱

```
constructor() { this.el = createRef() }
```

```
componentDidMount() {  
  const customElement = this.el.current;  
  customElement.someProperty = props.thing;  
}
```

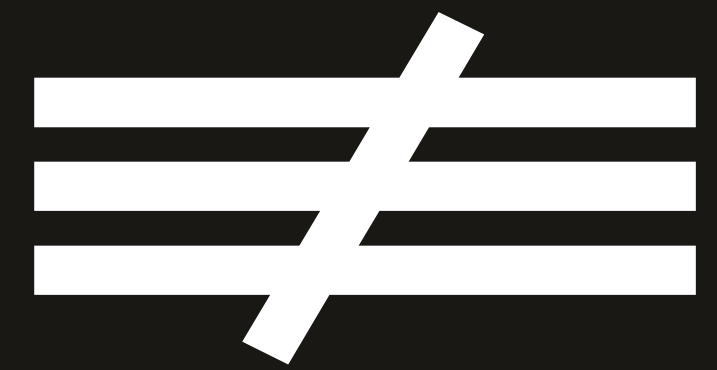
```
<custom-element  
  ref={this.el}
```

```
/>
```

EW.

WHY?

JSX PROPS



DOM PROPERTIES

// JSX → React component prop 🤘

<ThingList

things={props.things}

>

// JSX → reserved handler 🤘

<div

onMouseOver={handler}

>

// JSX → 🤯

<custom-element

someProp={props.things}

>

4. CUSTOM ELEMENT EVENTS

**SAME AS
PROPERTIES,
BASICALLY**

```
constructor() { this.el = createRef() }
```

```
componentDidMount() {  
  const customElement = this.el.current;  
  customElement.onSomeEvent = handleSomeEvent;  
}
```

```
<custom-element  
  ref={this.el}
```

```
>
```

```
constructor() { this.el = createRef() }
```

```
componentDidMount() {  
  const customElement = this.el.current;  
  customElement.addEventListener(  
    "someEvent",  
    handleSomeEvent  
  );  
}
```

```
<custom-element  
  ref={this.el}  
>
```

`$ { demo }`



**WHAT HAVE
WE LEARNED?**

**REACT CAN RENDER
CUSTOM ELEMENTS...
TODAY**

**EVENTS UP,
DATA DOWN**

INTEROP DIFFICULTY 
WITH WEB COMPONENT
COMPLEXITY

OTHER CONSIDERATIONS

- **Server-side rendering**
- **Complex state management**
- **Interop projects**
- **Browser support & polyfills**



Dan Abramov

@dan_abramov

Follow



Replying to @dan_abramov @PowersBenny

Personally I'd like to think we'll get it into 17. I see no reason why it wouldn't fit there. (By the time we released 16 there was no consensus from WC community on how exactly it should work, but it seems like there is more of that now.)

11:58 PM - 2 Jun 2019

FURTHER READING

LitElement: lit-element.polymer-project.org

StencilJS: stenciljs.com

SkateJS: github.com/skatejs/skatejs

w3c standards: github.com/w3c/webcomponents

Custom Elements Everywhere: custom-elements-everywhere.com

webcomponents.org: webcomponents.org

Google Web Fundamentals: developers.google.com/web/fundamentals/web-components

open-wc: open-wc.org/guide

THANKS!

@markpalfreeman