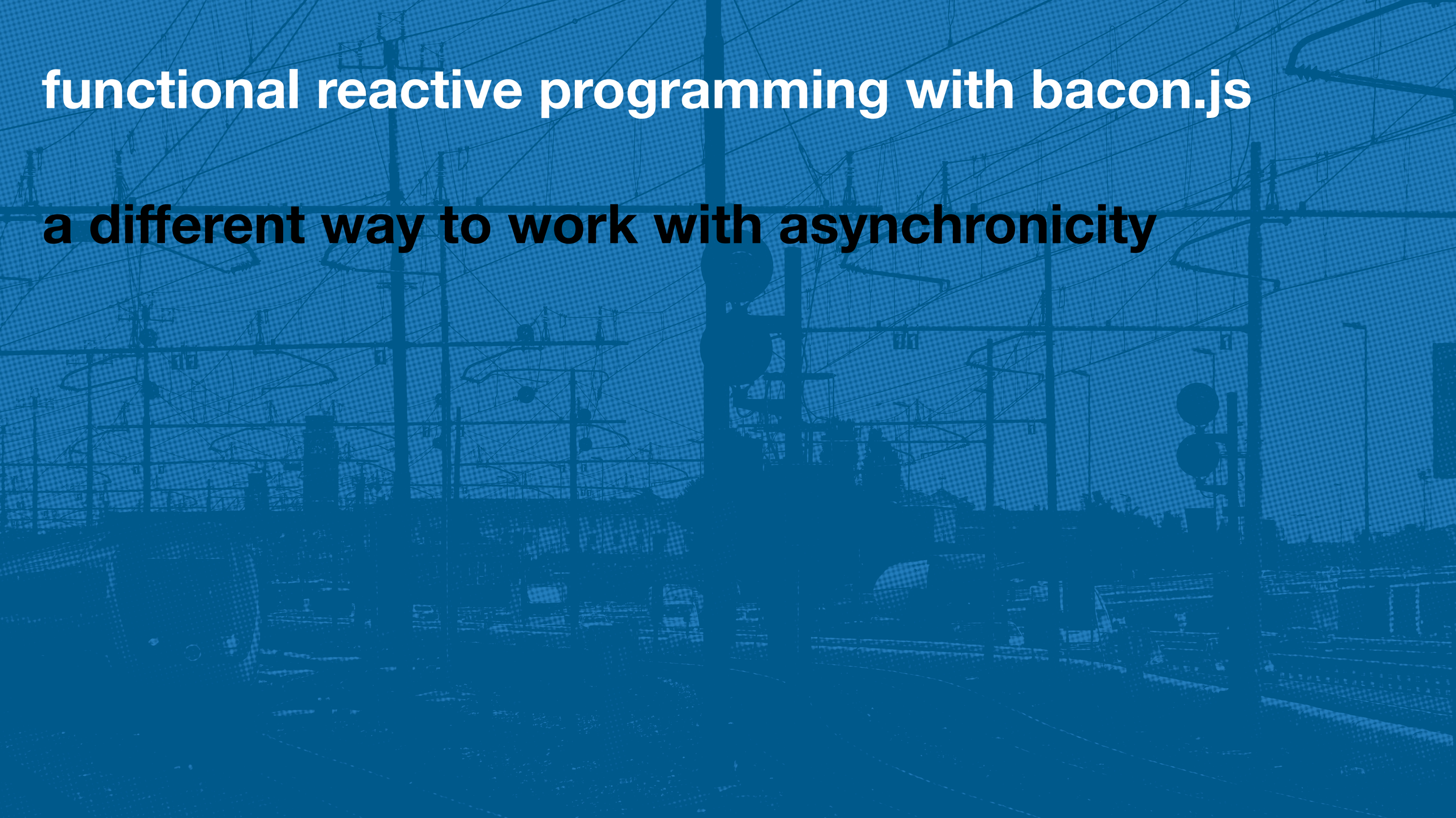
functional reactive programming with bacon.js
a different way to work with asynchronicity

why?

we like functional style (pure functions, immutability)

we care about good UX

managing state is hard

what does it give us?

familiar concepts to the UI (`map`, `filter`, `"flatMap"`)

higher abstractions for managing async events

clear data flow transformations using pure functions

reduce explicit state manipulation

the elephant

"just look at the types"

it's just a new tool we can use now, or in the future with TypeScript or PureScript

not a hammer: we don't need to rewrite everything

event stream

an "immutable" stream of chronological events

```
var changes = $('form').asEventStream('change');
```

can write our own (`Bacon.fromBinder`**)**

property

similar to an event stream but with a *current value* (maybe with an initial value)

```
var params = changes.map(toRequestParams)
                    .toProperty(initialParams);
```

example 1: counting clicks

```
// capture clicks
var clicks = $('button').asEventStream('click');

// create a new stream where each click is a 1
var values = clicks.map(1);

// produce a property for the number of clicks
var counter = values.scan(0, plus);
```

example 2: capturing triple clicks

```
var clicks = $('button').asEventStream('click');

clicks
  .bufferWithTime(300)
  .map('.length')
  .filter(function(size) {
    return size >= 3;
  });
```

example 3: asynchronous operations

```
// define our data flow
var changes = $('form').asEventStream('change');
var request = changes.map(serializeToObject);

// create a new event stream for each form change and flatten into one
var response = request.flatMapLatest(compose(Bacon.fromPromise, send));

// create boolean property that represents _waiting_
var waiting = request.awaiting(response);

// update DOM when state changes
waiting.onValue(toggleSpinner);
response.onValue(renderResults);
response.onError(renderErrors);
response.filter(isEmpty).onValue(renderEmptyMessage);
```

questions?

more examples?

followup?