Sequences and Time

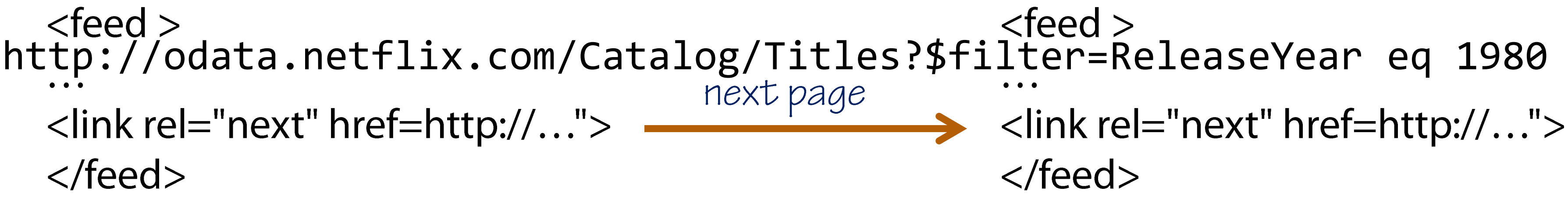
If I could put time in bottle…

Overview

- Timestamp
- Interval
- Timer
- Timeout
- Throttle

OData Feed

- **OData feed**
  - data wrapped in XML
  - page | not stream | oriented
  - .NET supports OData as a Data Service
- **Generate**
  - consume pages | produce sequence



```
http://odata.netflix.com/Catalog/Titles?$filter=ReleaseYear eq 1980
```

```
<feed >
...
<link rel="next" href=http://...">
</feed>
```

next page

```
<feed >
...
<link rel="next" href=http://...">
</feed>
```

DataSequence

- LINQ to sequence is easy
- Repeated query execution
- Need state

```
(select title from netflix.titles).Skip(200).ToObservable()
```

Timestamp

- **Adds timestamp to OnNext**
    - □ Timestamped ⇨ Timestamp, Value

```
sequence.Timestamp()
```

Timer

- **Produces sequence of counting numbers at defined rate**

```
Observable.Timer(startup_delay, period)
```

TimeInterval

- **Records time between values in sequence**
  - TimeInterval ⇨ TimeSpan, Value

Throttle

- **Replaces burst with last value**
  - burst when period below some minimum

37. .6. .87...**34**...................56. 8 . 33. 81. .90. 100.................64 . 81 . 43 . 0. .34 .5

Timeout

- **Prevents subscription from running for too long**
  - throws exception

```
Timeout(expire time, scheduler)
```

Summary

- DataSequence
- Timer
- Timestamp / TimeInterval
- Timeout
- Throttle

References

- **Fiddler**
  - http://www.fiddler2.com