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
```

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

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DataSequence

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

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

DataSequence

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```
(select title from netflix.titles).skip(400).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

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