

POSEIDON

for RESTful Streaming



WHO ARE WE?

- Sharat, Eden, Yahui, Artem - Students at Brandeis
- Pito Salas - Professor and mentor

GOALS

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- Understand capabilities of Streambase system

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- Brainstorm new or novel ways to interact with it

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- Understand capabilities of Streambase system
- Brainstorm new or novel ways to interact with it
- Hopefully bring useful ideas to the table
- Potentially influence Streambase's development cycle

STREAMBASE STUDIO

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- High performance

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- Extremely powerful tool
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- Cross platform
- High performance
- No programming experience needed

STREAMBASE STUDIO

Disclaimer: our impressions are naive!

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- Streaming requires both endpoints to implement protocol (sender + receiver)*
- Compile, run workflow
- No flow through data

OUR TAKE...

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- Web browser based
 - No installation
 - Fast delivery

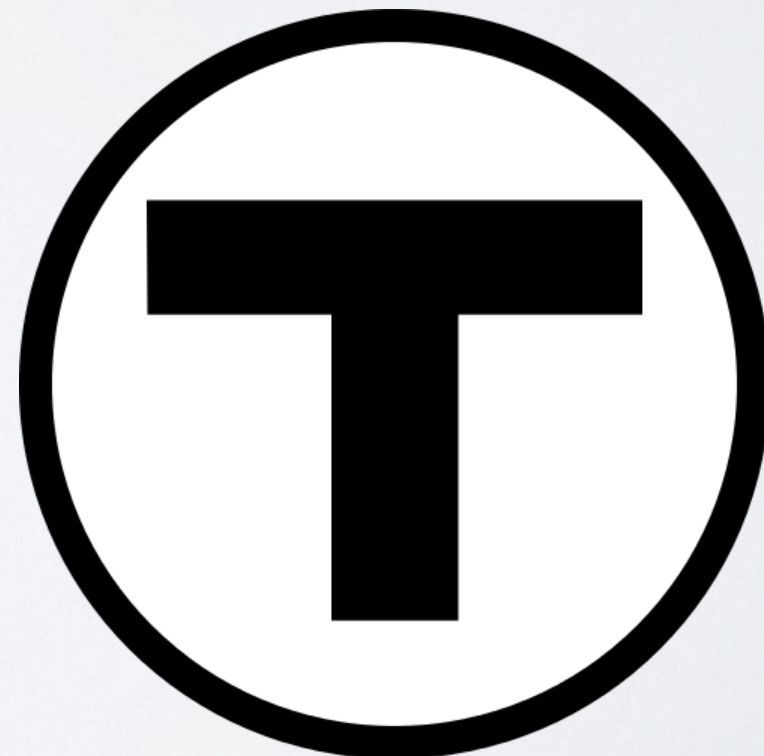
OUR TAKE...

- Web browser based
- RESTful API
- *Quasi-universal in the world of low performance live data*

REST API



YAHOO!
FINANCE



OUR TAKE...

- Web browser based
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- Live stream construction

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 - Data flows as soon as nodes are connected

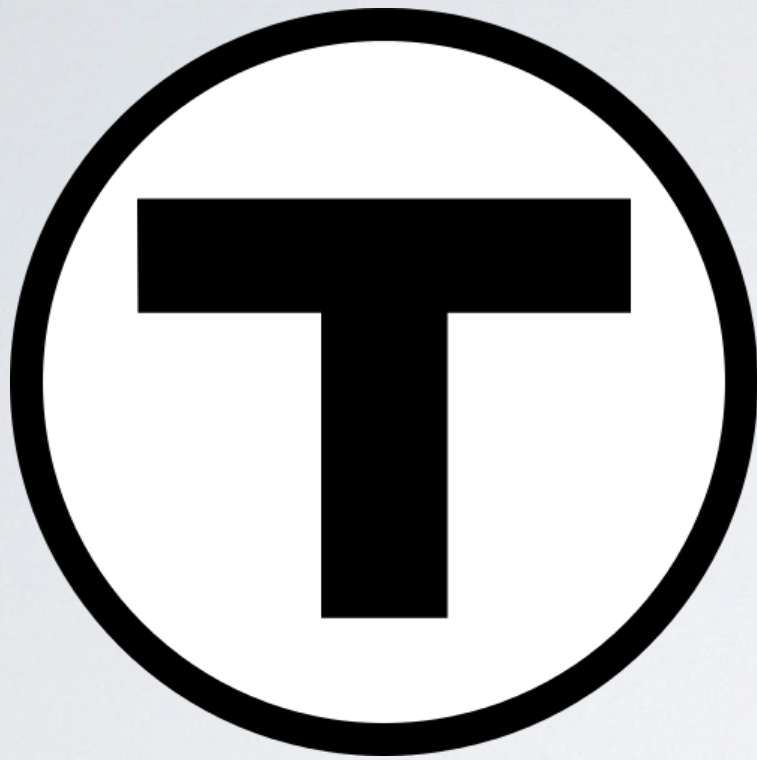
OUR TAKE...

- Web browser based
- RESTful API
- Live stream construction
 - Data flows as soon as nodes are connected
 - Live debugging of data

OUR TAKE...

- Web browser based
- RESTful API
- Live stream construction
- JSON Format

A “QUERY”



Do more people ride the T
when the weather is nice?

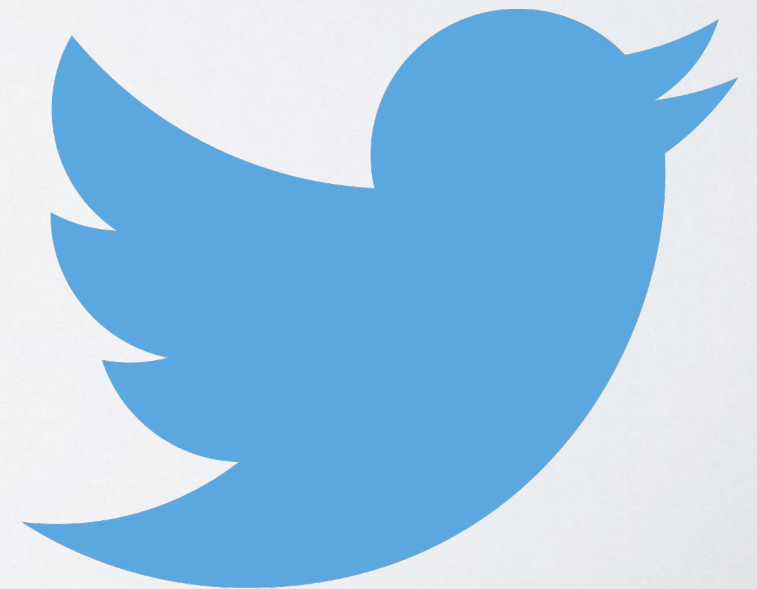


A “QUERY”



Do more people ride the T
when the weather is nice?

And how do they feel
doing it?



A “QUERY”

How is the stock market
doing on days with nice
weather?



YAHOO!

FINANCE

DEMO

STACK

- Vaadin

vaadin }>

STACK

- Vaadin
- Java based

vaadin }>

STACK

- Vaadin

- Java based

- Asynchronous

vaadin }>

STACK

- Vaadin

- Java based

- Asynchronous **vaadin** }>

- Generates Javascript, CSS from Java Code

- Google Web Toolkit based

PROGRESS

- Basic UI - simple and compelling
- Connects to REST sources
- Maps JSON
- Operators partially implemented (Filter, In, Out, Map)
- Data live view

TODO

- Fully implement operations
- Out of the box parallelism, including UI Push
- Fully customizable workflows
- Saving and user state
- Export to database

VAADIN

- Pros
 - Front-end and back-end framework
 - Google Web Toolkit
 - Numerous Plugins

VAADIN

- Pros:
- Cons:
 - Theory > Implementation
 - UI debugging is very cumbersome
 - Steep learning curve to become expert
 - Alternatives: Rails, Javascript framework

WRAP-UP

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 - Browser based

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- Novel approach to Streambase Studio
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 - No compilation with modest performance
 - Live data view with live modifications