Cincom

SINGLE PAGE
WEB APPLICATION DEVELOPMENT WITH SiouX AND AppeX

By Jerry Kott

Cincom®

- **HTTP(s)** server based on **Xtreams**
- Lightweight, highly configurable, streaming, secure
- Integrates easily with **Seaside**, **Web Services**, **Servlets**
- Multiple responders, multiple port listeners

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- Web application **framework** using **SiouX** and **Xtreams**
- Core **Javascript** library on the client, seamlessly connects to the server (**Smalltalk**)
- JS **code editor** integrated in VW IDE
- **Object-Oriented JS** with class hierarchy (before ECMAScript 6!)
- **W**hat **Y**ou **W**rite **I**s **W**hat **Y**ou **G**et

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AppeX is NOT...

- Smalltalk in the browser (but we have an Amber integration example)
- A Smalltalk to JS translator (Smalltalk code lives on the server, JS code loads unchanged into a web client)
- Just a Javascript editor (but having one is great!)
- A multi-page web site development tool (although it's possible, and we have code examples for that)

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New in AppeX (Cincom® VisualWorks® 8.1)

- **RESTful** API demos
- **ActiveRecord** support (PUT, GET, POST, DELETE)
- UI **Scaffolding** - JS classes seamlessly build **HTML5** elements on the client from ActiveRecord objects on the server
- Scaffolding **GUI tool** - builds client and server code from an existing ActiveRecord database

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New in AppeX, cont‘d

- Added **jsonStream:** service type. JSON object serialization now can be in-memory or directly on the socket stream (e.g., large objects)
- **ETag** support for client resource **caching** (less bandwidth)
- CSS **Themes**
- **LinuxPAM** - user authentication

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Let‘s Get Practical!

Coming up:

- Loading SiouX code and configuring servers and responders
- Code samples
- Loading AppeX
- Creating a database backed web application

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Loading SiouX Parcels

- **SiouX-Server**: basic HTTP server & framework
- **SiouX-Http**: HTTP protocol on top of Xtreams
- **SiouX-Server-Secure**: HTTPS support (SSL/TLS)
- **SiouX-Tools**: GUI tools for managing servers
- **SiouX-Examples**: examples for study & inspiration

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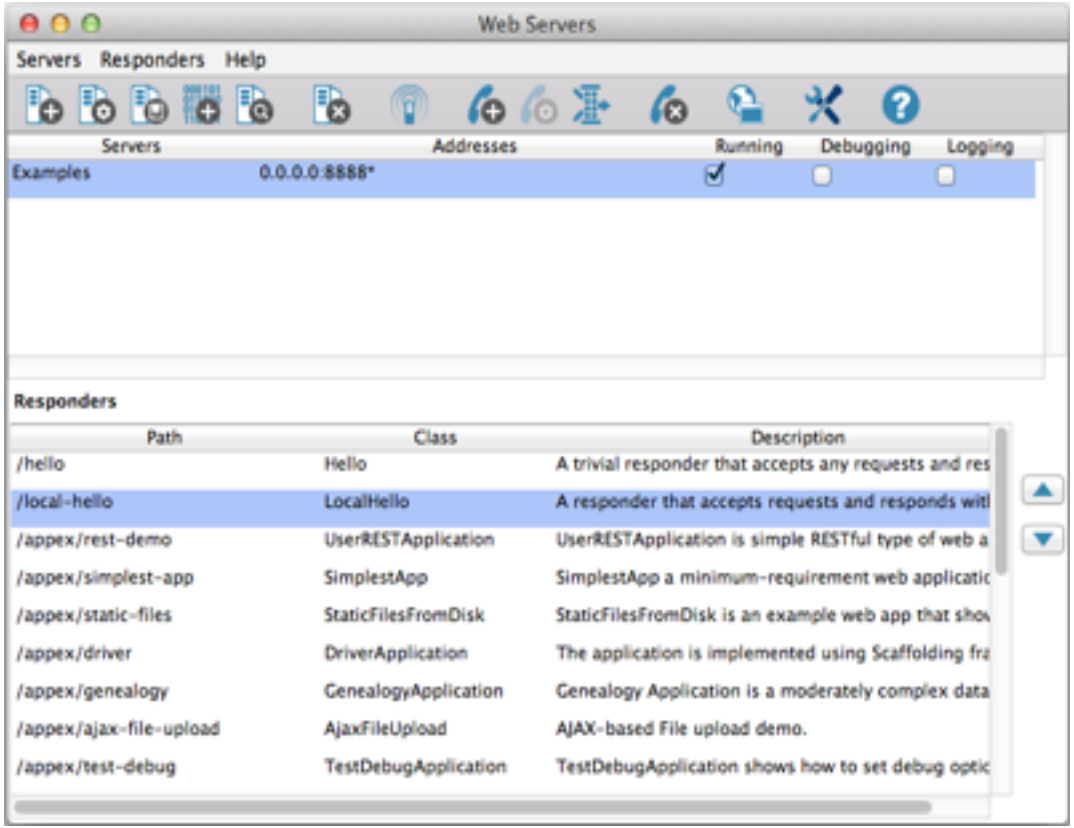
Demo: Web Servers Tool



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Creating a Server

```
server := Server id: 'Demo Server'.
listener := server listenOn: 9999 for: SiouX.HttpConnection.
server start.
server addResponder: (responder := Hello new).
responder openWebBrowser.
Hello browse.

server release.
```


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From SiouX to AppeX

- SiouX provides the transport and dispatching mechanism
- Responders are flexible but not very sophisticated
- Need for an application layer with a tight IDE and web browser integration
- Welcome AppeX. ESUG 2014 presentation

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Loading AppeX Parcels

- **AppeX-Core**: framework with both server (Smalltalk) and client (Javascript) classes
- **AppeX-Tools**: IDE integration, JS parser & editor
- **AppeX-Examples-***: aspects like server events, mobile apps, Seaside integration, etc… Explore!
- **AppeX-ServerMonitor**: functional equivalent of SiouX Web Servers management tool.

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AppeX Parcels, cont‘d

- (new) **AppeX-ActiveRecord**: extensions of AppeX, Glorp and ActiveRecord classes
- (new) **AppeX-Scaffolding**: a framework for ActiveRecord-backed Web applications
- (new) **AppeX-Scaffolding-Tool**: GUI tool to generate ActiveRecord classes and service methods. Result is a functional web app.

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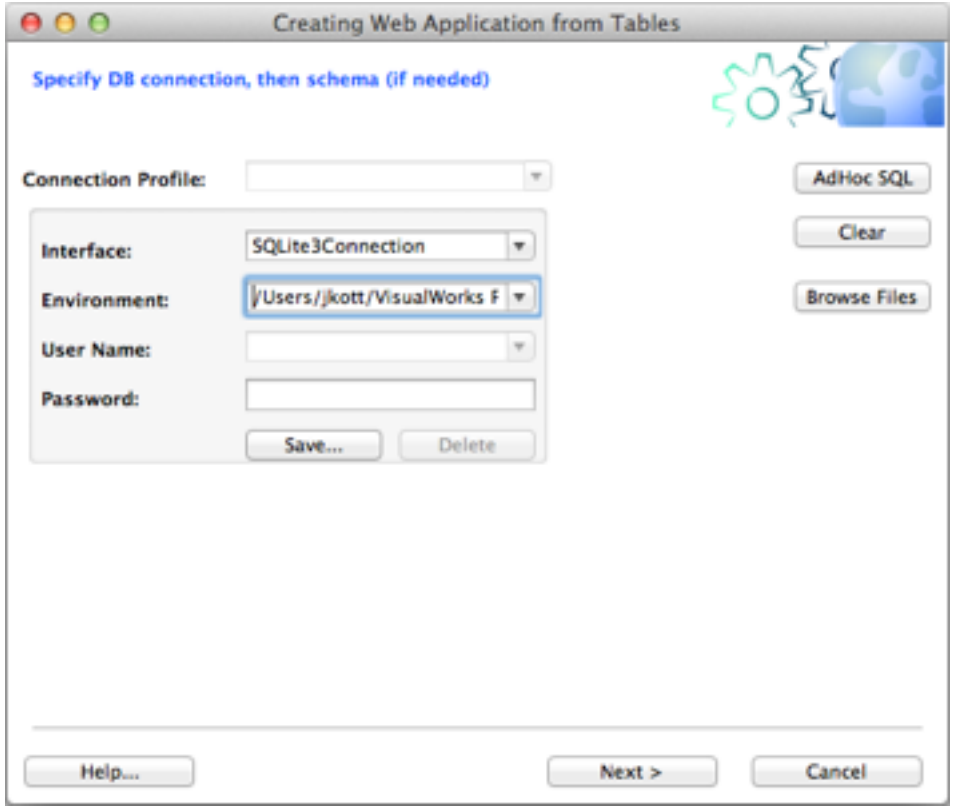
Demo: Scaffolding Tool

Launcher

➡ Tools

- Create Web Application



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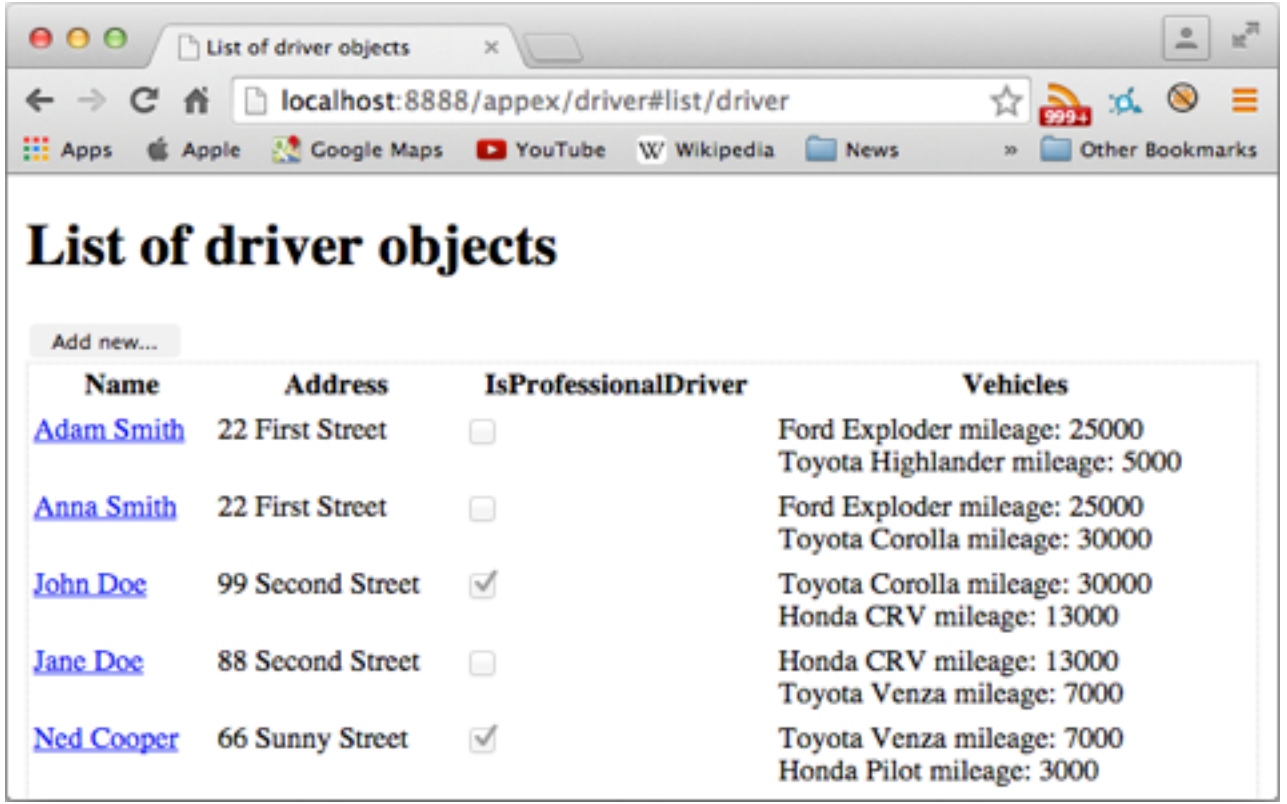
Funcational App - Zero Coding



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Customized Web Apps

Customize by subclassing Scaffolding classes:

- ListPresenter
- DetailPresenter
- EditPresenter
- SelectionPresenter

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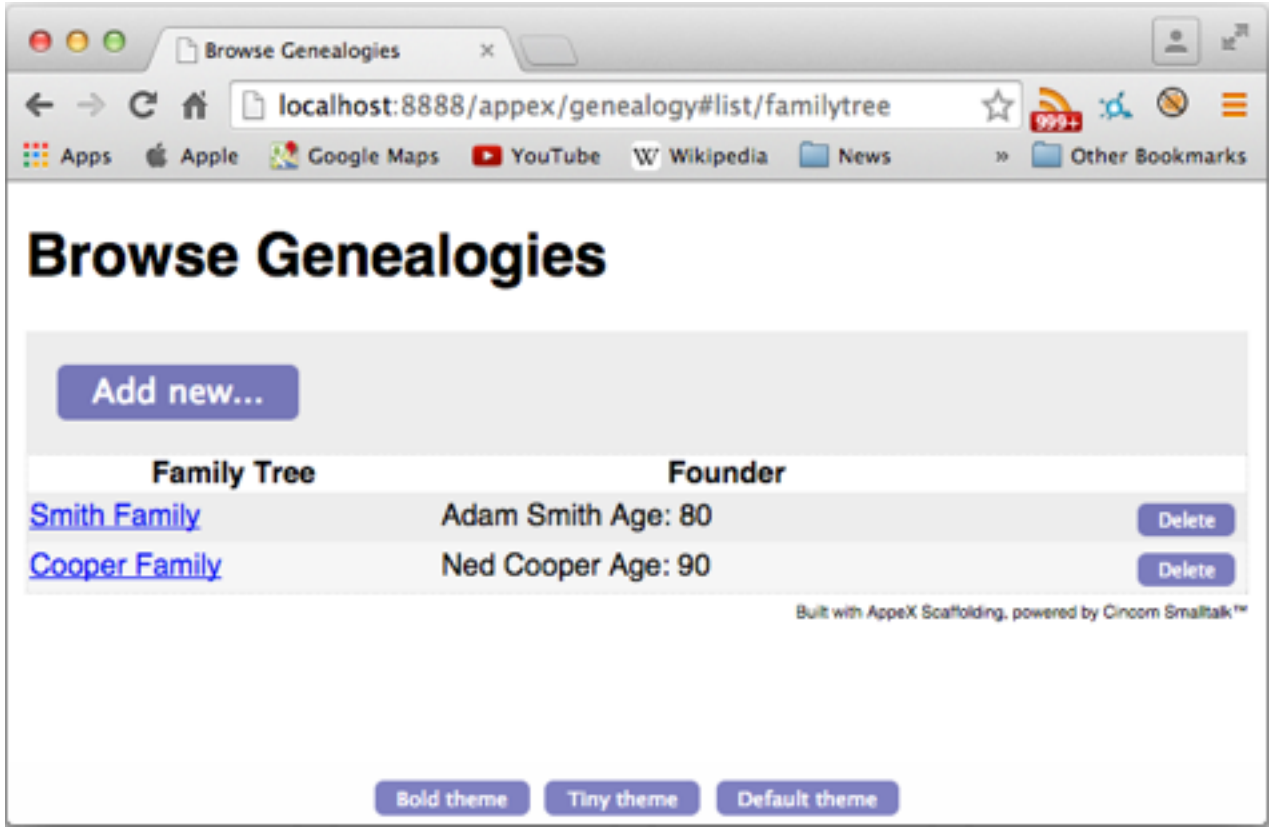
Custom App Demo



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Questions?

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