

AJAXWORLD™
RIA CONFERENCE & EXPO

JUNE 22-23, 2009
THE ROOSEVELT HOTEL
NEW YORK, NY

Occasionally Connected AIR and BlazeDS Applications

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Get this slide deck at <http://tinyurl.com/nbnaqd>

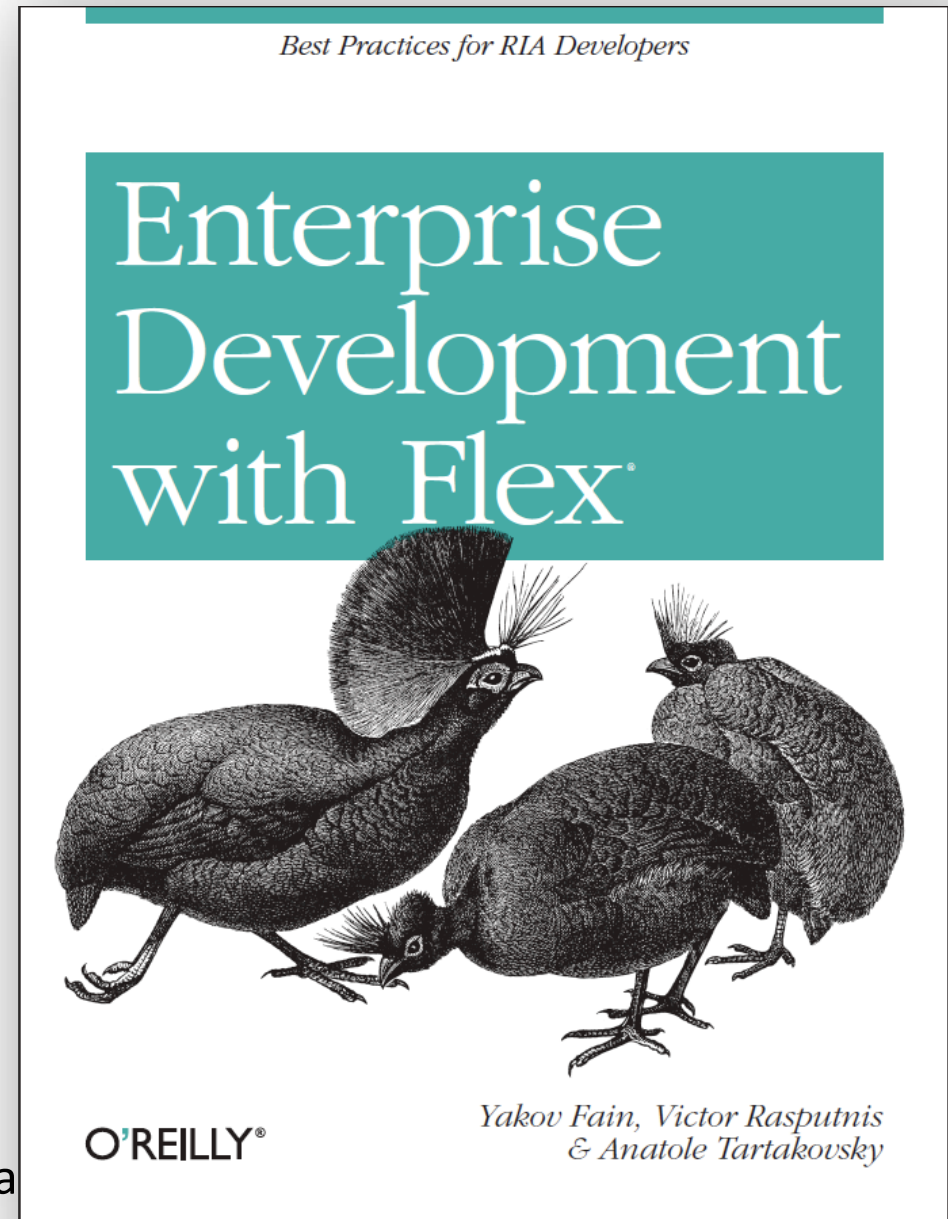
Introducing Farata Systems

RIA with Flex and Java:
consulting and mentoring (\$\$)

Open Source Framework
development (for free)

Writing tech. books and
articles on Java and Adobe
Flex (\$0 to \$1 per hour)

[www.farata](http://www.farata.com)



Adobe Integrated Runtime (AIR)

AIR 1.5 is a step toward providing a full platform for desktop application development.

AIR offers development and **predictable runtime environment** for AJAX and Flex developers.

To run AIR applications, the user's computer must have AIR runtime installed (About 15MB).

Adobe AIR is cool because

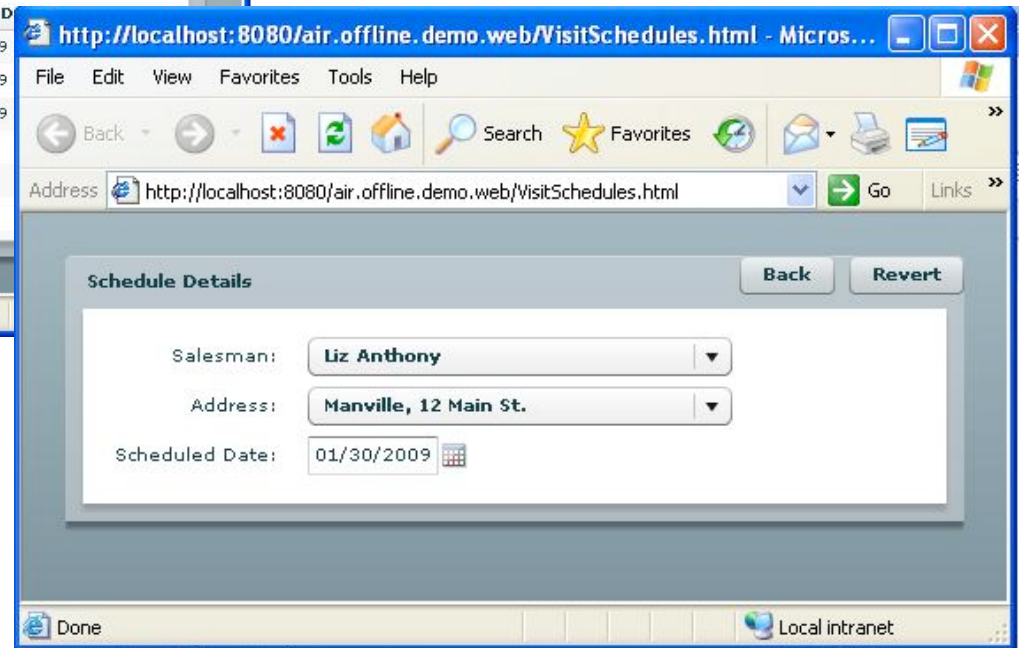
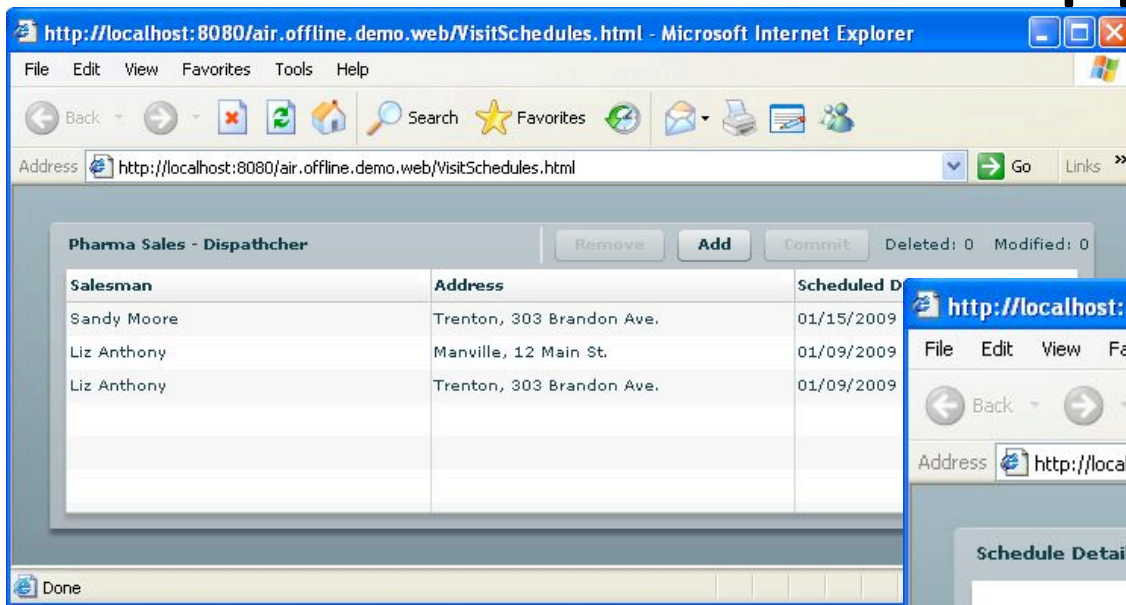
1. AIR supports I/O operations with user's file system
2. AIR allows you to sign and version applications
3. Updater controls proper upgrades of the apps
4. AIR comes with a local database SQLite to keep the data (in clear or encrypted mode) on the user's PC
5. AIR applications can monitor network connections
6. You can run AIR applications when disconnected
7. AIR has better than Flex support of HTML

Adobe AIR is **not** cool because

1. AIR can't make calls to user's OS
2. AIR can't launch non-AIR applications
3. AIR can't instantiate a DLL
4. AIR can't call an ActiveX
5. AIR can't directly access ports on user's PC
6. Adobe doesn't offer data synchronization support for apps that use BlazeDS
7. AIR Doesn't allow PDF Generation on the client

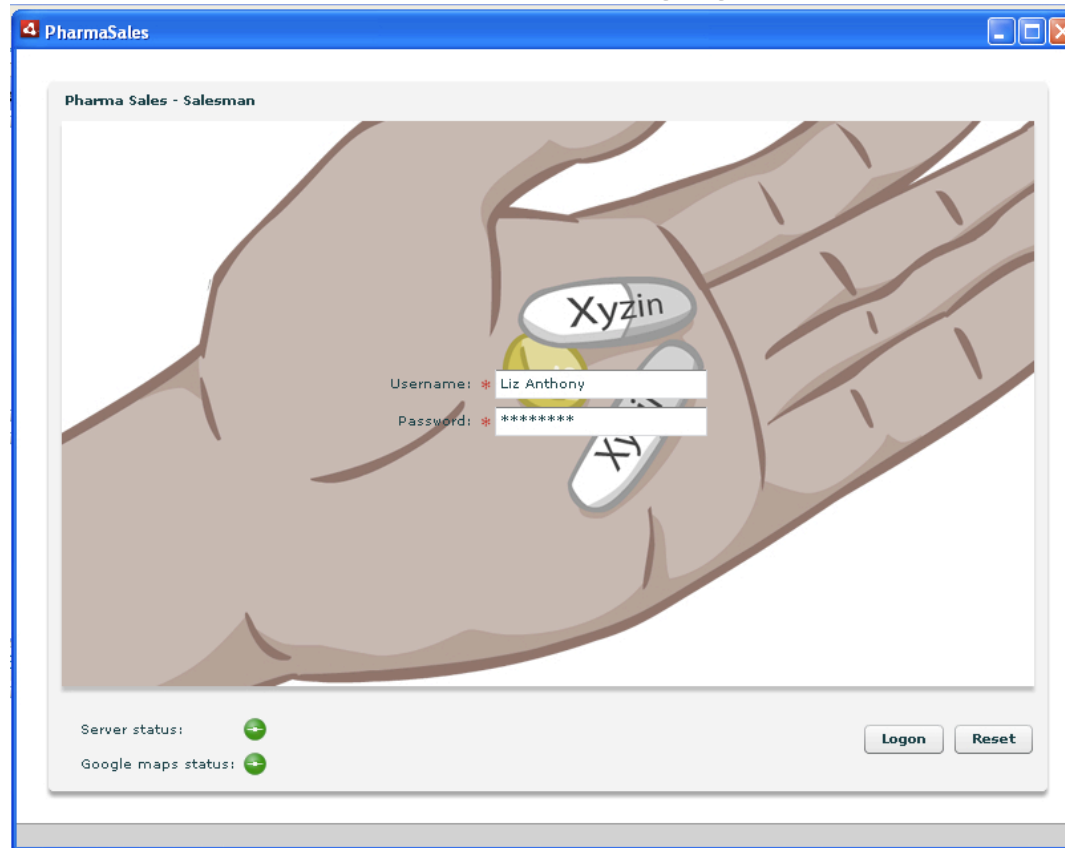
Farata Systems fixed items 6 and 7

PharmaSales Application



Every day a dispatcher of Acme Pharma Inc. schedules visits for salesman stored in the corporate database.

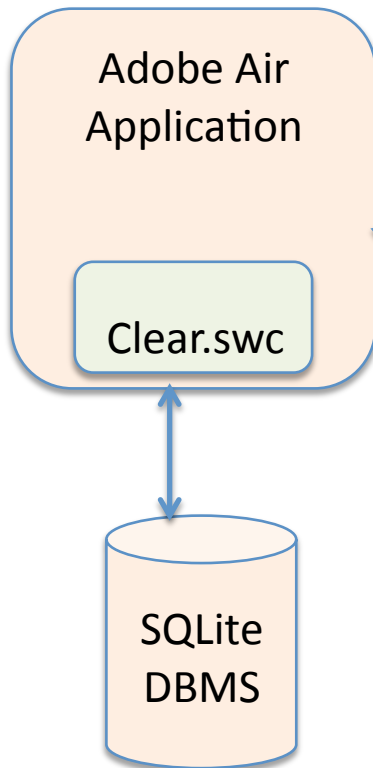
PharmaSales Application



Every morning a salesman starts PharmaSales **AIR** application, which connects to the corporate database (MySQL) and automatically into a local database (SQLite) that exists on salesman's laptop.

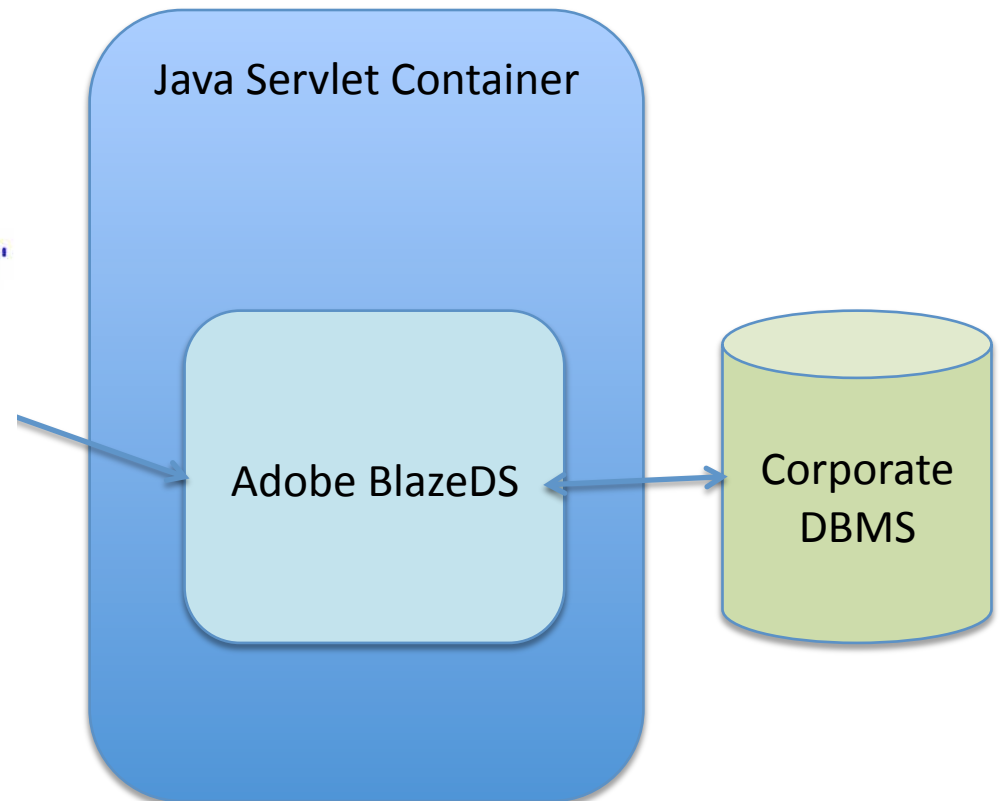
Architecture of Pharma Sales

Client

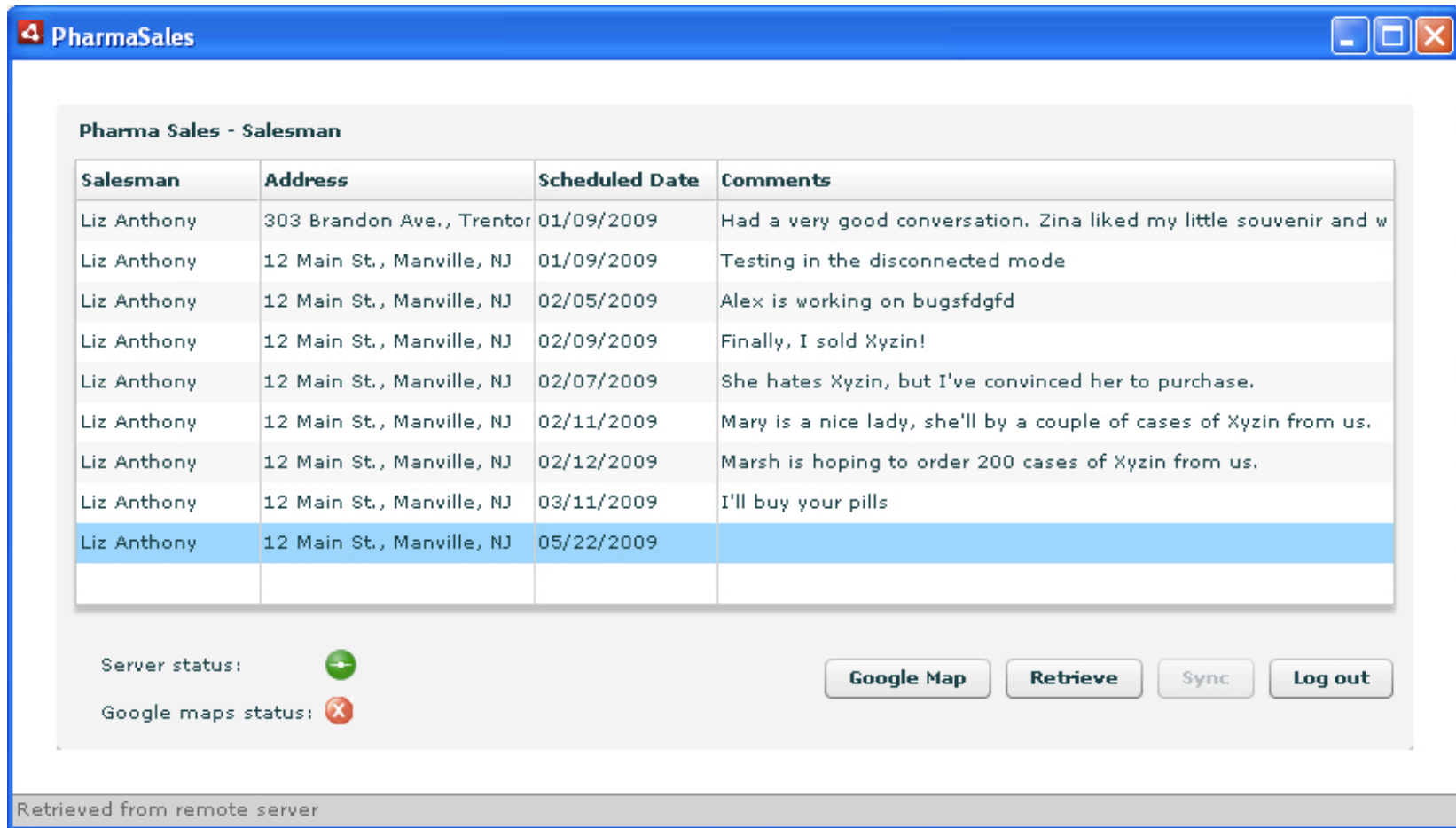


Server

"DAMN... I LOST THE CONNECTION"



Liz can see her visits for today



The screenshot shows a web application window titled "PharmaSales". Inside, there is a section titled "Pharma Sales - Salesman" containing a table with the following data:

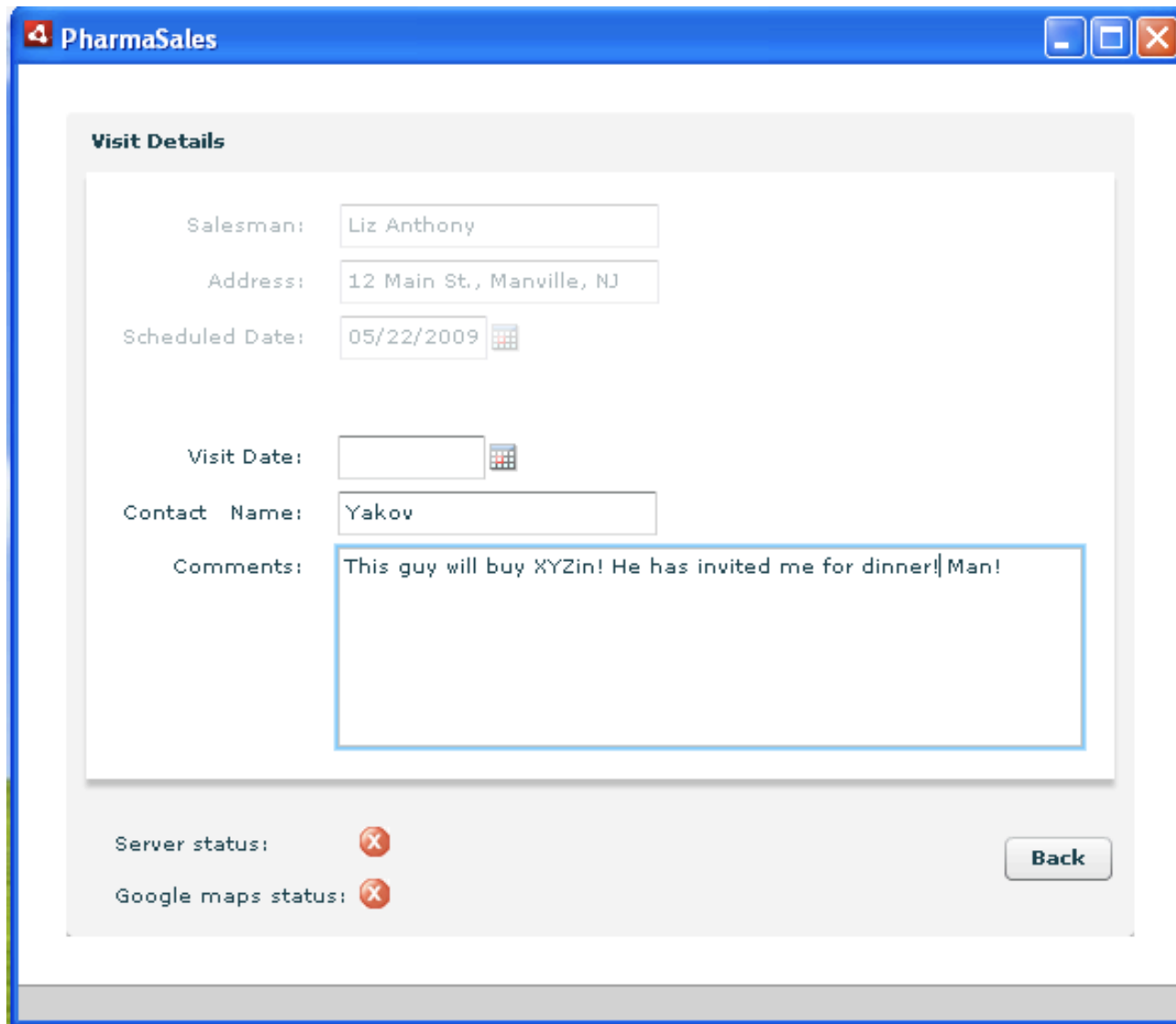
Salesman	Address	Scheduled Date	Comments
Liz Anthony	303 Brandon Ave., Trenton	01/09/2009	Had a very good conversation. Zina liked my little souvenir and w
Liz Anthony	12 Main St., Manville, NJ	01/09/2009	Testing in the disconnected mode
Liz Anthony	12 Main St., Manville, NJ	02/05/2009	Alex is working on bugsgfdgfd
Liz Anthony	12 Main St., Manville, NJ	02/09/2009	Finally, I sold Xyzin!
Liz Anthony	12 Main St., Manville, NJ	02/07/2009	She hates Xyzin, but I've convinced her to purchase.
Liz Anthony	12 Main St., Manville, NJ	02/11/2009	Mary is a nice lady, she'll by a couple of cases of Xyzin from us.
Liz Anthony	12 Main St., Manville, NJ	02/12/2009	Marsh is hoping to order 200 cases of Xyzin from us.
Liz Anthony	12 Main St., Manville, NJ	03/11/2009	I'll buy your pills
Liz Anthony	12 Main St., Manville, NJ	05/22/2009	

Below the table, there are status indicators: "Server status:" with a green plus icon and "Google maps status:" with a red X icon. To the right are four buttons: "Google Map", "Retrieve", "Sync", and "Log out". At the bottom left of the window, it says "Retrieved from remote server".

Liz doesn't know that her visits were saved in the local database SQLite.

Liz doesn't give a damn! She just knows it's safe to disconnect and hit the road.

Liz visits a medical office



The screenshot shows a web application window titled "PharmaSales". Inside the window, there is a section titled "Visit Details" containing several input fields and a text area. The fields are filled with the following information:

- Salesman: Liz Anthony
- Address: 12 Main St., Manville, NJ
- Scheduled Date: 05/22/2009
- Visit Date: (empty)
- Contact Name: Yakov
- Comments: This guy will buy XYZin! He has invited me for dinner! Man!

At the bottom of the window, there are two status indicators: "Server status:" and "Google maps status:", both with a red 'X' icon. A "Back" button is located in the bottom right corner of the main content area.

She enters the comments about this visit...

Liz saves the visit notes locally

The screenshot shows a web application window titled "PharmaSales". Inside, there is a section titled "Pharma Sales - Salesman" containing a table with the following data:

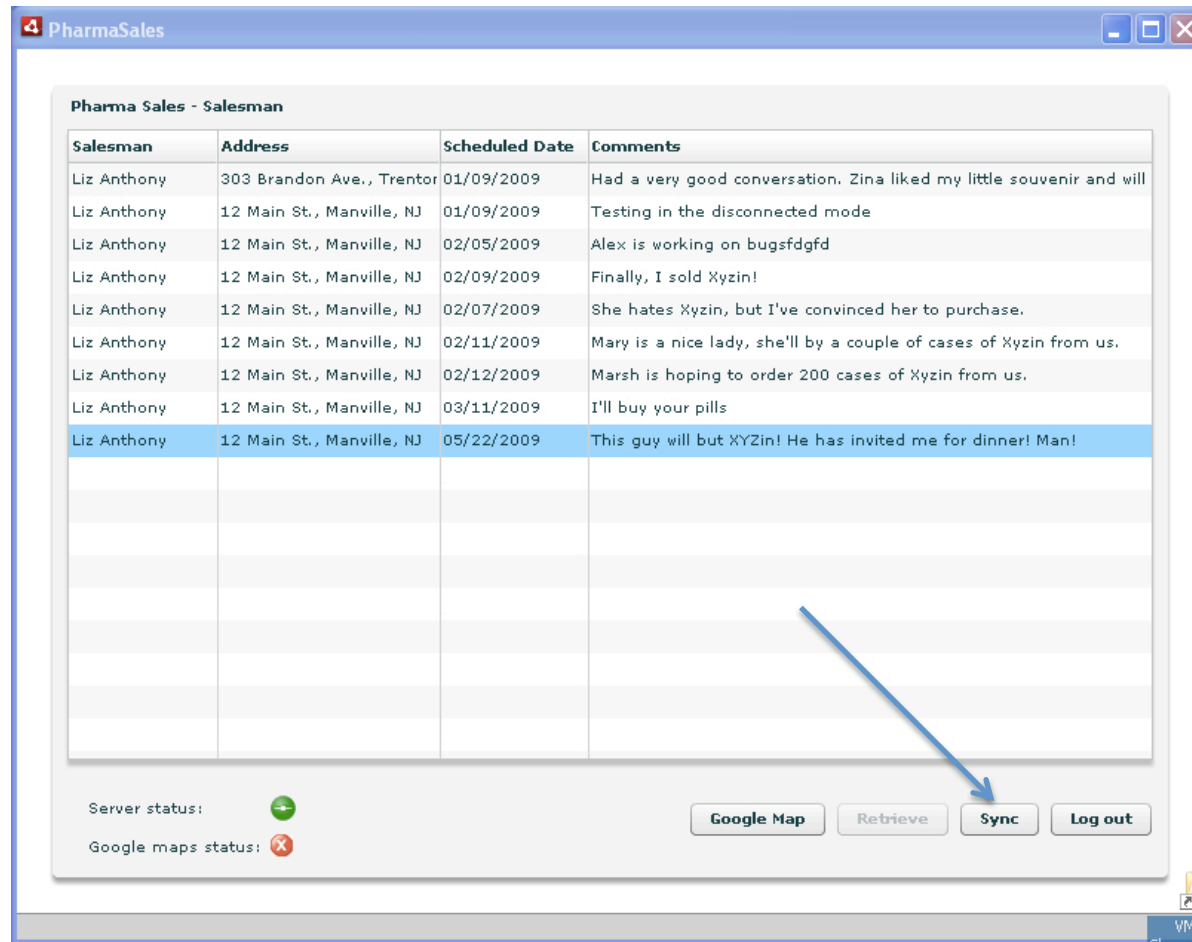
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Liz Anthony	12 Main St., Manville, NJ	03/11/2009	I'll buy your pills
Liz Anthony	12 Main St., Manville, NJ	05/22/2009	This guy will buy XYZin! He has invited me for dinner! Man!

Below the table, there are two status indicators: "Server status:" and "Google maps status:", both with a red 'X' icon. To the right, there are four buttons: "Google Map", "Retrieve", "Save", and "Log out". A blue arrow points from the "Save" button to the last row of the table, and another blue arrow points from the "Server status:" indicator to the text "Please note, we are disconnected." below the screenshot.

Please note, we are disconnected.

Liz came home late...

She inserted the network cable in her notebook and started the PharmaSales application



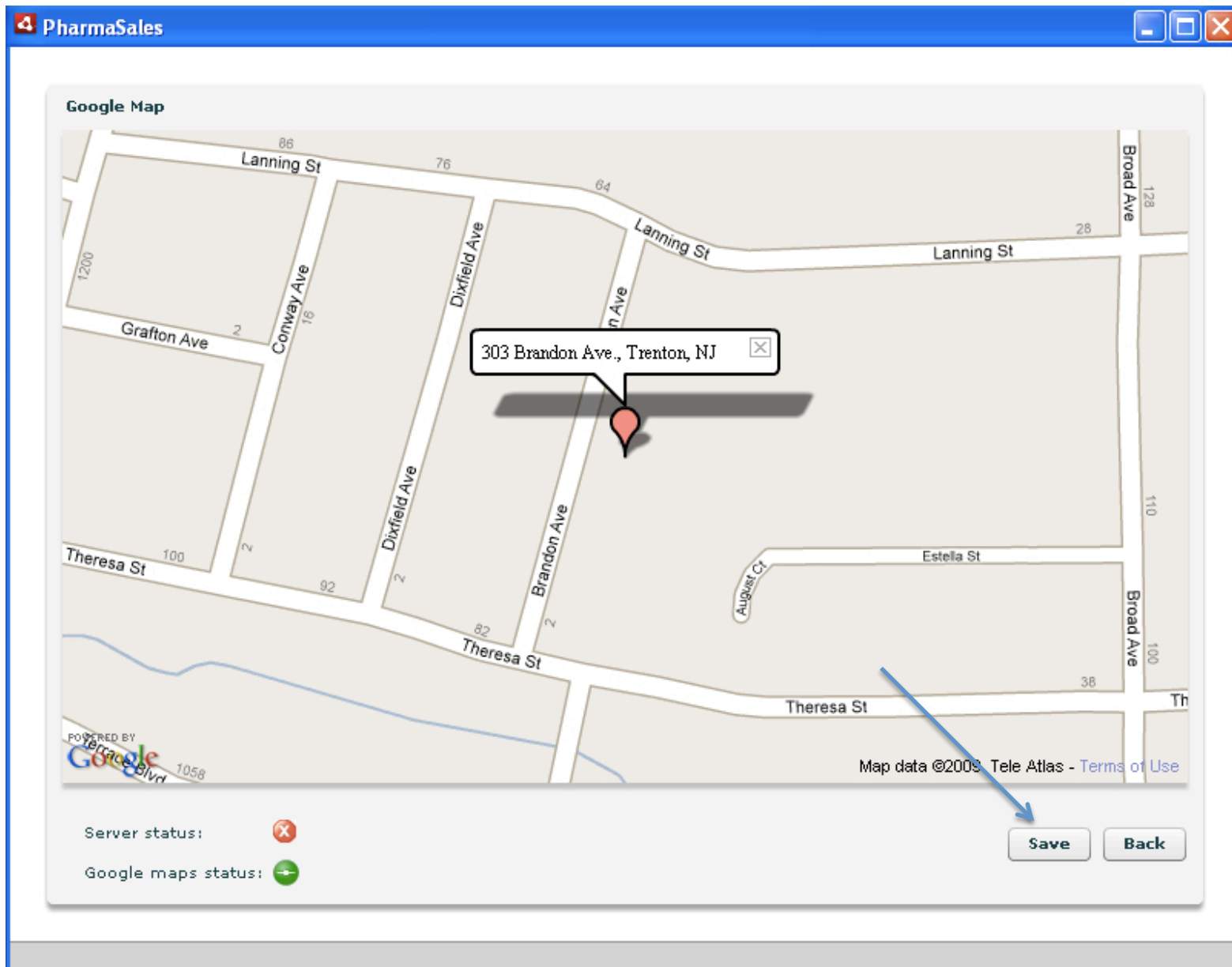
Liz is a little *drunk*, but she can see the button Sync. She clicks on it and falls asleep...

Clear Toolkit is cool because

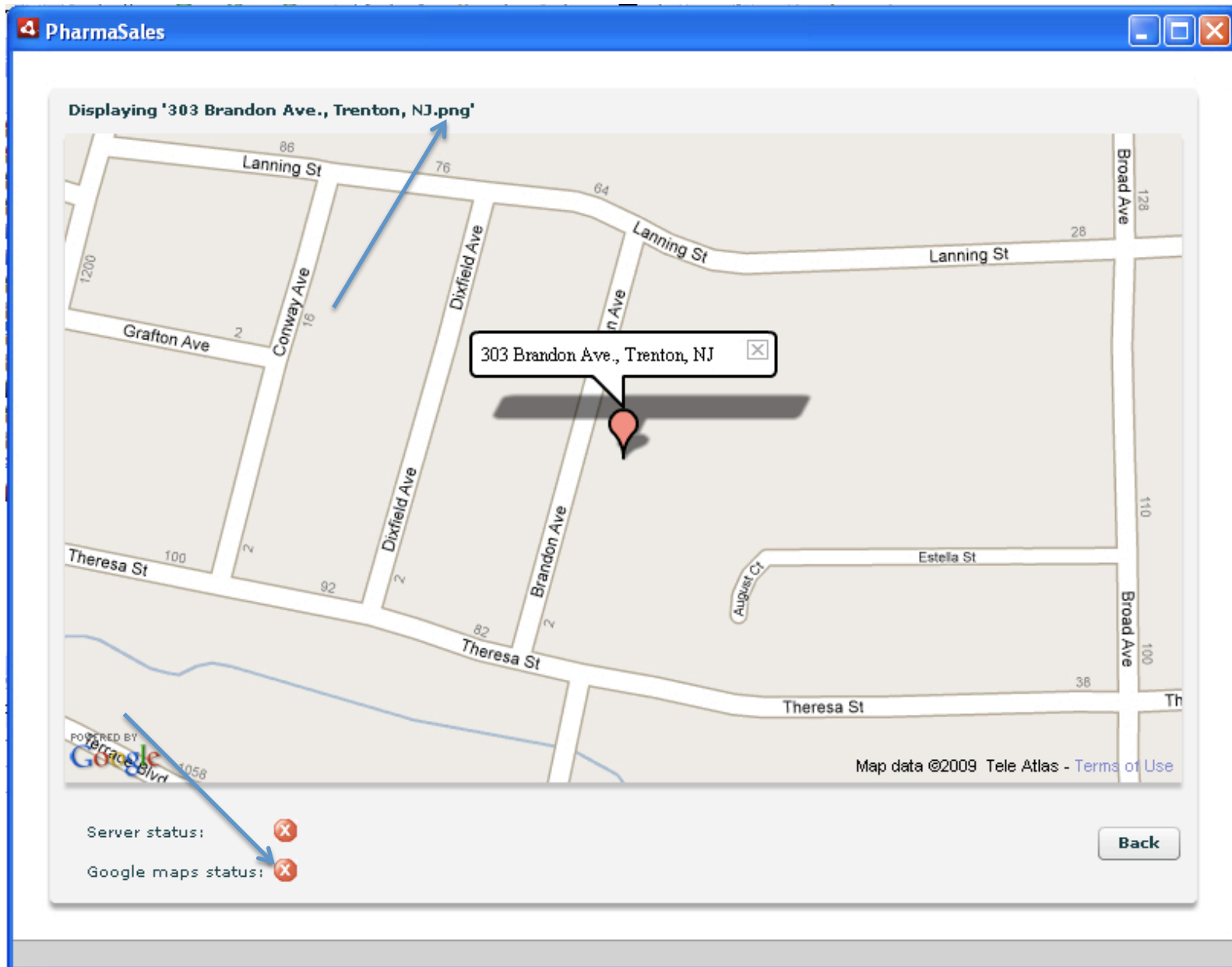
It supports data sync between the local SQLite database with BlazeDS. The local data are sent to the Acme Pharm central DBMS.

This is done by the class **OfflineDataCollection** that comes with **clear.swc**, a library of Flex components from open source Clear Toolkit <https://sourceforge.net/projects/clear toolkit/>.

It's nice to have a map handy...



...Even if you are disconnected



Let's add PDF printing to
Pharma Sales Application

PDF Generation on the client

1. Open source library AlivePDF (<http://alivepdf.org/>)
2. Flex UI components from Clear Toolkit library (<http://sourceforge.net/projects/clear toolkit>), which can expose their state in an XDP format to be used for generation PDF.


Printing into a local pdf file


PharmaSales

Pharma Sales - Salesman

Select Date Range: Show all

Salesman	Address	Scheduled Date	Comments
Liz Anthony	12 Main St., Manville, NJ	02/05/2009	Alex is working on getting us in
Liz Anthony	12 Main St., Manville, NJ	02/09/2009	Finally, I sold Xyzin!
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Server status: 

Google maps status: 

Saved to C:\Documents and Settings\Administrator\Application Data\PharmaSales\Local Store\lg.pdf

Generated PDF with header and footer

dg.pdf (application/pdf Object) - Mozilla Firefox

File Edit View History Bookmarks Yahoo! Tools Help

file:///C:/Documents and Settings/Administrator/Application Data/PharmaSales/Local Sto

64.3%

1 / 1

Visits by Liz Anthony from 02/02/2009 to 05/22/2009

Salesman	Address	Scheduled Date	Comments
Liz Anthony	12 Main St., Manville, NJ	02/05/2009	Alex is working on getting us in
Liz Anthony	12 Main St., Manville, NJ	02/09/2009	Finally, I sold Xyzin!
Liz Anthony	12 Main St., Manville, NJ	02/07/2009	She hates Xyzin, but I've convinced her to purchase.
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Acme Pharm - your reliable source of drugs

Done

Live Demo of Pharma Sales
And
Code Walkthrough

Contact Info & Links

Email: yfain@faratasystems.com

Pre-recorded demo of Pharma Sales application:

<http://flexblog.faratasystems.com/?p=394>

Clear Toolkit: <http://sourceforge.net/projects/clear toolkit/>

O'Reilly Book "**Enterprise Development with Flex**":

<http://my.safaribooksonline.com/9780596801465>

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