

Best Practices for Enterprise Smartphone Development

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iPhone has changed the game

- All users now *want* to run apps on their smartphones
- But
 - writing native apps that run at the edge is quite different than web apps
 - Tools for mobility are mostly the same as 20 years ago
 - Approaches to mobile development don't incorporate modern software engineering

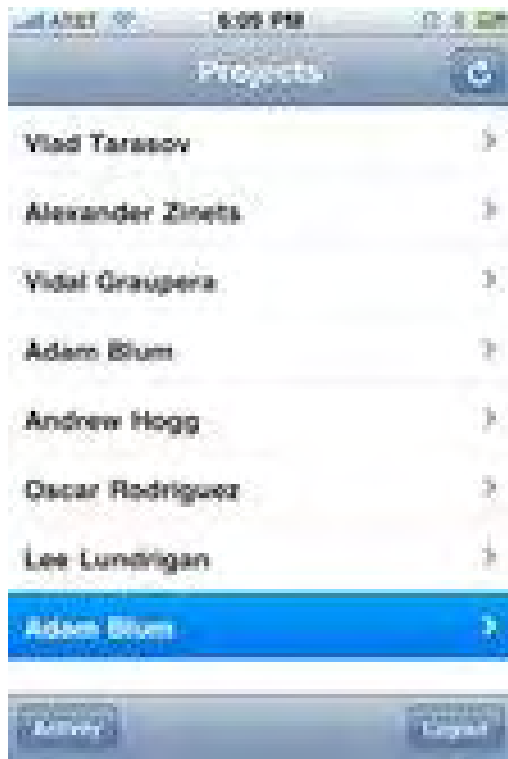
Avoid Typing

- Pick reasonable default settings
 - number of records, objects to be shown, languages, sort orders
- Don't have any setup process EVER
 - first screen should be functional
- Use information on device to pick
 - locations
 - people

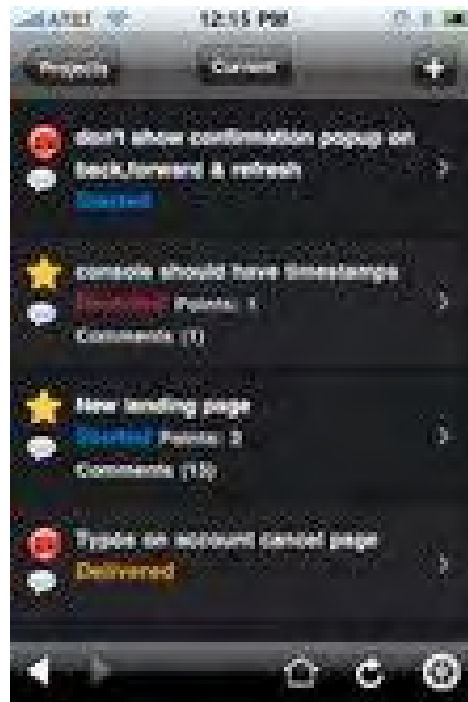
Context Sensitivity

- take users right to the data
 - common metaphor: list of records at top level
 - or a map with objects
 - using location, time, user info to select
- but no top level lists to select the right object type/function
- settings as an option on the tab bar

iPivotal



TrackR (Koombea)



Local Data

- make it possible to use the app without connectivity
- insure that user's work on transactions (Create/Update/Delete) is never lost
- automatically cache (through database or otherwise) frequently used data

Handle Varying Schemas

- Large enterprise apps (CRM, ERP) rarely have fixed/"out of box" schema
- Need to handle varying builtin objects (account, contact, task, etc.)
- Plus handle inevitable changes to those schemas

one reason why apps for CRM/ERP are rare on the App Store

What To Do: RhoLogic for SugarCRM



(written with Rhodes)

Sync

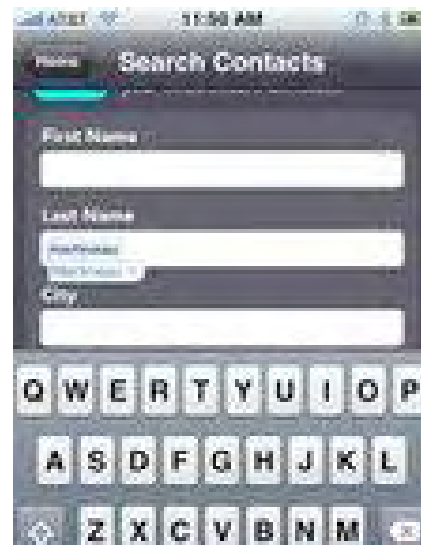
take people to their objects right away. summarize data on the device with dashboards

Reload

Limit Objects/Functions

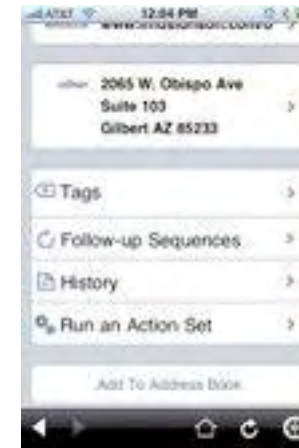
- ideally one main object types
- no more than two or three “dependent objects”
- limit features/functions/actions on objects

IFusion



no local data (sync so you can access contacts when offline)? no save to local PIM contacts?

InfusionSoft

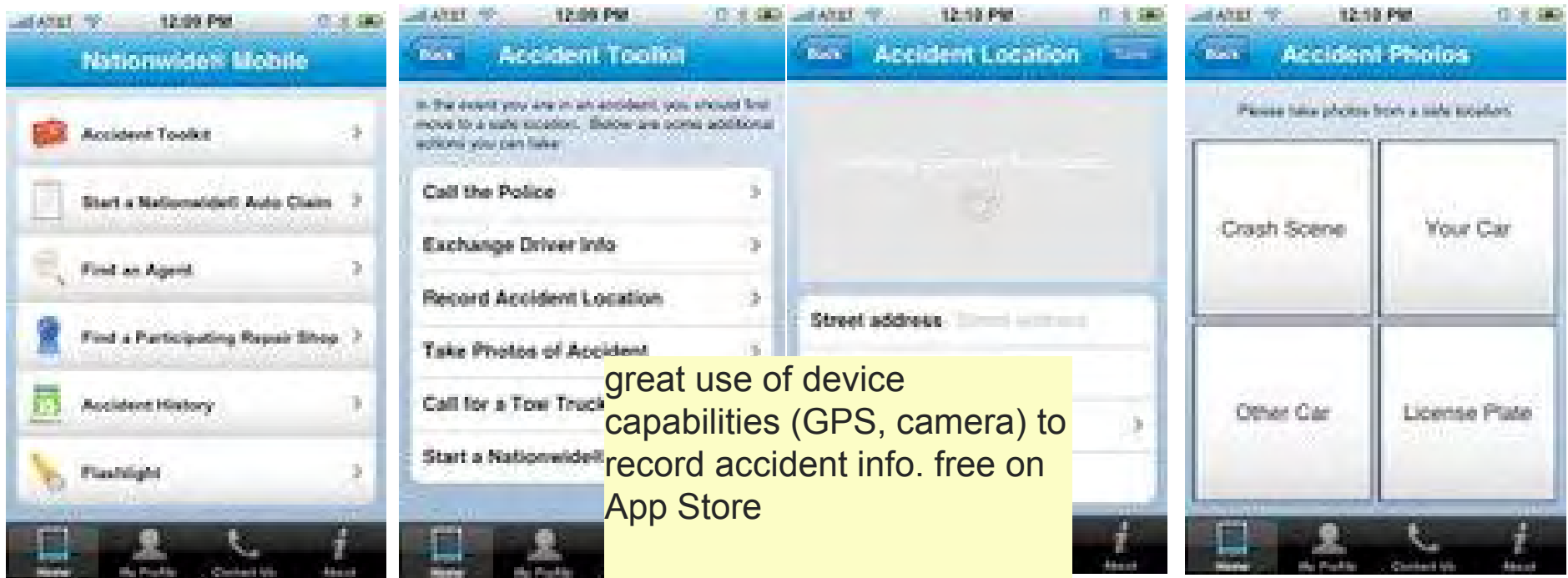


written with Rhodes. data is synced and available offline. robust set of capabilities on each contact (tags, followup sequence, history, action set). save to PIM (address book)

Device Capabilities

- smartphones have senses: sight, hearing, touch
- don't do myopic web ports
- you can probably use:
 - GPS
 - mapping
 - PIM contacts
 - camera

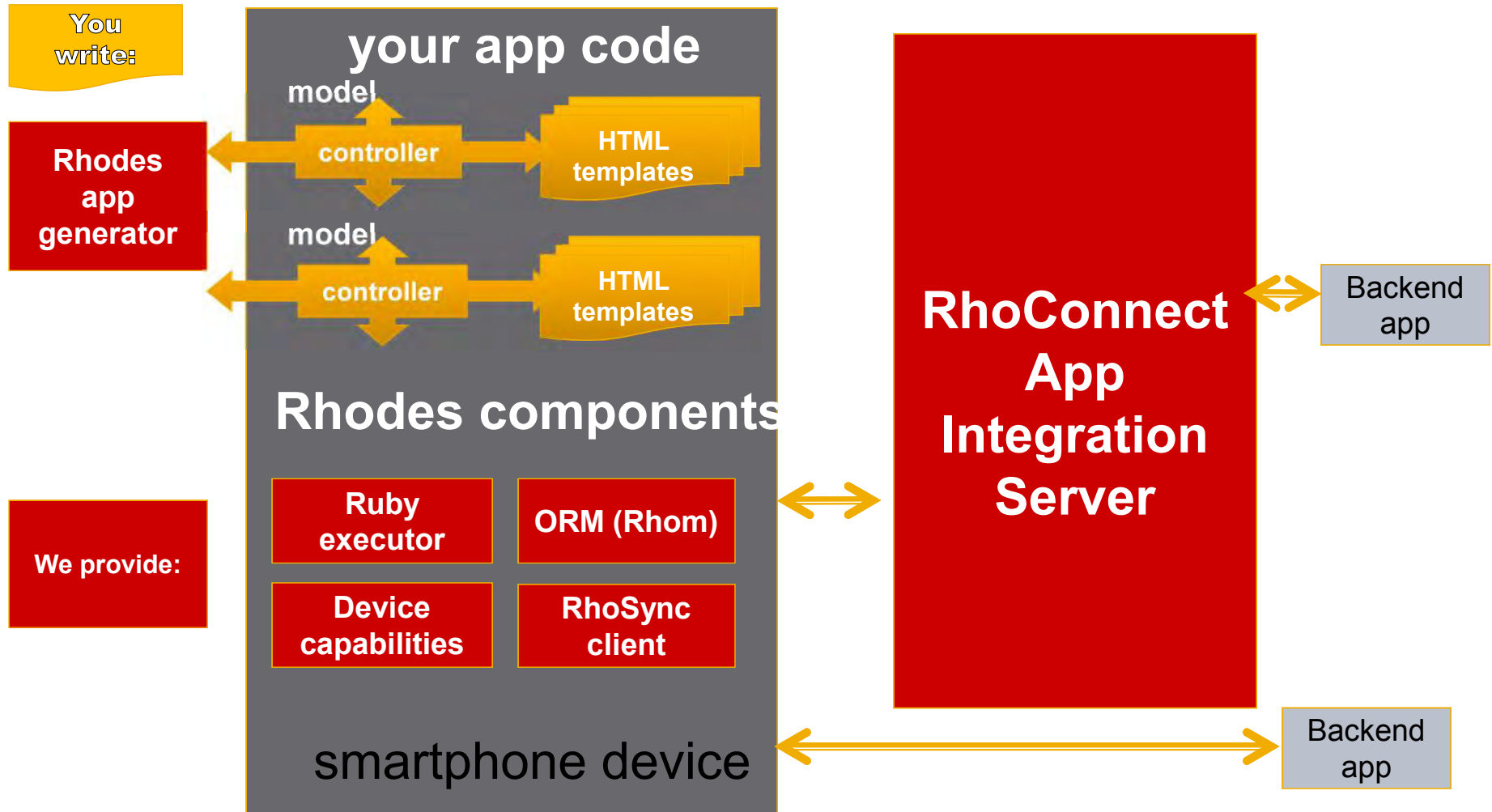
What To Do: Nationwide Claims App



Rapid Iterations

- deliver small identifiable features frequently
- use a toolset that enables rapid iteration
 - Objective C might not be the best one for that

Rhodes Architecture



Handle Your Whole Userbase

- Android and iPhone have great growth
- But BlackBerry and Windows Mobile have enterprise installed bases that aren't going away
- Windows Phone 7 looks good
- Symbian is still huge worldwide
- MeeGo may get used for tablets
- Samsung makes great phones and now have Bada OS

Summary

- Avoid typing
- Context sensitivity
- Leverage the device
- Support all devices
- Synchronized local data
- Handle varying metadata
- Rapidly iterate (use a framework)