SPLICER™
DATA MODEL AUTOMATION

BACKGROUND

Gartner predicts that by the end of 2017, demand for Enterprise mobile apps will outstrip development capacity by Five to One.

PROBLEM

In a typical Enterprise mobile system, client data structures are not methodically correlated to the server's. This limits development scalability because as our app portfolio grows, we hand-code the client-server data mapping each time. Instead of automating this piece somehow, engineers write integration and data translation code – **consuming roughly 80% of the Enterprise development cost.** Eventually, mapping sets of apps to multiple data sources further complicates code development and maintenance.

SOLUTION

Splicer solves these problems via an automated, client-server data Model mechanism. This Model Map graphically depicts your client-server relationships, which unlocks an Agile mobile channel into your relational databases.

WHY SPLICER?

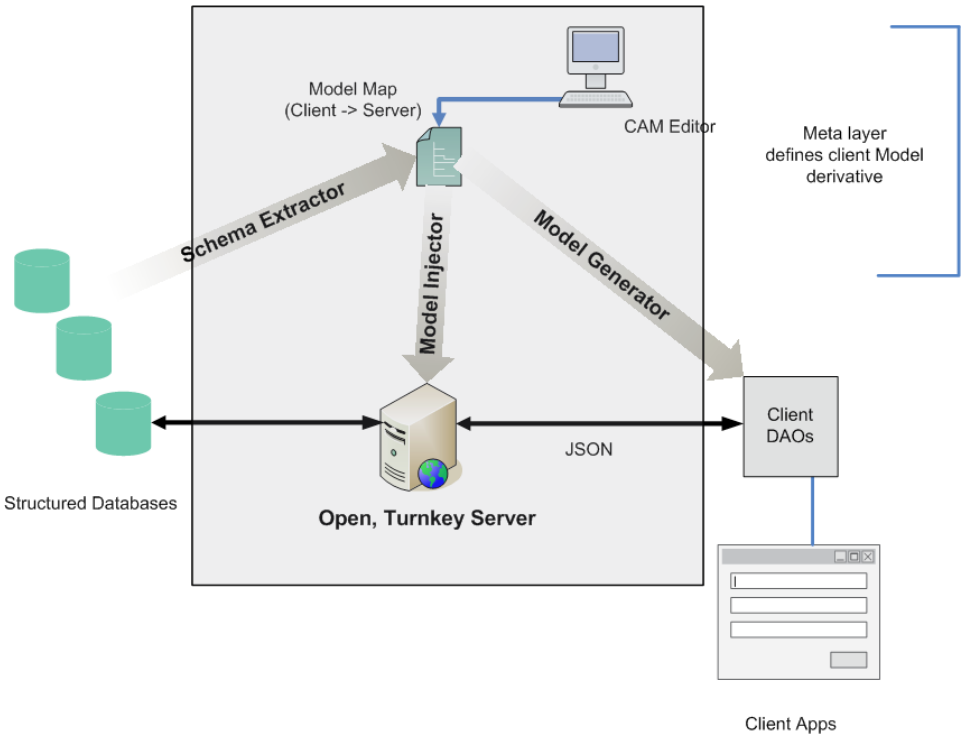
Splicer allows you to easily map client data structures to relational databases. Once this pivotal relationship is established, client coders gain access to DAOs ("Data Access Objects") -- just like server coders use.

KEY BENEFITS

- Conveniently integrate relational data from multiple sources into mobile apps
- Bypass limited IT capacity via a "low code" path to Enterprise data
- Eliminate complex client-server integration
- Code natively
- Easily modify client-server data structures for RAD
- Streamline your native mobile development process
- Gain better control over distributed development teams

TYPICAL USAGE

The diagram illustrates how Splicer exposes structured server data to the "edge":

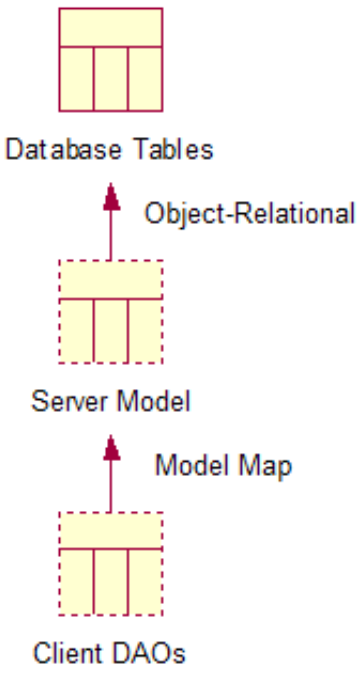


KEY FEATURES

- Creates client-server Models from database schemas
- Visual Model designer directly generates "build" artifacts to complement coding
- Push-button creation of an open source, turnkey, data delivery stack including APIs
- Open source, turnkey server fully customizable
- Clients access data via typed-safe DAOs
- Open, neutral Model definition
- Compatible with Realm.io mobile database
- Optional web forms

KEY UML

Conceptually, the Model Map schema derives client Models from server Models:



SPLICER DIFFERENTIATION

Unlike other low-code platforms, Splicer enables a comprehensive Model Map. From this Map, it generates lightweight, type-safe DAOs for mobile coders

GENERATES DATA MODEL FROM DATABASE SCHEMAS

Upgrade development capabilities by creating a schema definition of your client-server Model. Splicer leverages your existing model artifacts by extracting a Model schema from them.

OPEN SOURCE GUI CREATES CLIENT MODEL DERIVATIVES

Once you've extracted the master schema, use the open-source CAM GUI to construct a client derivative of it. CAM is short for "Content Assembly Mechanism" and is a powerful, visual tool that can be used for integrating database schemas. Splicer is compatible with this tool for defining client data subsets – allowing us to "cherry pick" data elements for our mobile clients. CAM also illuminates the Model to functional designers for deeper functional definition – reducing team coordination and meetings. From this Model Map, Splicer generates Model artifacts that are part of the development "build" – replacing items we previously hand-coded. Now as architects, we can deliver more than just data: we deliver Models of that data.

OPEN SOURCE, TURNKEY SERVER

Since the Splicer server leverages the Model Map to transfer relational data, you get push-button creation of a mobile data delivery stack including APIs. This provides not only the convenience of a turnkey server, but also full-stack source code control. This bridge provides a new "low code" path into Enterprise data, and also is available as a cloud service.

CLIENTS ACCESS DATA VIA TYPED OBJECTS

Since Splicer generates Models that compile into the build, client developers write code that must conform to it. Because we use our Android and IOS compilers to enforce Model conformity, they tell us when human code is in conflict with changes to the Model Map. This means we can change data structures with more confidence. And coding is much simpler as client developers use DAOs to access data using standard Object-Oriented methods, and focus primarily on View coding.

PROPAGATE STRUCTURED DATA TO THE "EDGE"

Once you create Model Maps, the platform streamlines Enterprise mobile development by automating what we had previously hand-coded -- exposing structured data to mobile and IOT (the "edge") . Conceptually, the Splicer platform extends data structures to the top of the client-server stack, which eliminates swaths of code and the need to collate from multiple APIs. And code is vastly easier to maintain, which is 90% of TCO. Additionally, you can code natively with full stack control, yet the development efficiency typically associated with proprietary stacks.

OPEN, NEUTRAL MODEL DEFINITION

Your new meta definition layer -- the Model Map -- ties distributed systems together. And since you define this layer using open CAM templates, there is a long-term foundation into future implementations and utility.

WEB FORMS

The Splicer server can optionally expose Model data via React.js web forms.

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