Restoring Relevance with RESO’s Data Dictionary, API and Event Catalog

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Boring, but necessary slide

• I am not talking about RETS (1.5, 1.7.2 or 1.8)
• RETS is oriented towards “bulk” activities
• RESO Data Dictionary can be used in other ways
• RETS is too “hard”; developers are lazy
• DMQL too “heavy” for mobile use cases
B-School Slide

• Improves TTM by reducing complexity
• Improves efficiency of delivery
• Opens up new markets
• Increases development resource pool
• Improves customer satisfaction
Trio Courtesy of RESO

Data Dictionary
What is being moved

API Transport
How it is being moved

Event Catalog
When moving is needed
What are you talking about?
What is the Event Catalog?

• Actions performed by users
• Information to “fine tune” an action
• Data that results from an action
Events can Model a Life Cycle

- CreateListing
- RequestShowing
- UpdateListing
- MakeOffer
- TakeOffMarket
- Closed

- 12%
- 9%
- 79%

28 days
66 days
I need to be convinced!
Why have an Event Catalog?

- Work can specified in a common way
- Easy to build simple applications
- Resource Consumption analysis
Resource Consumption

- Shows how users consume your services
- Helps new product/service development

![Subscriber Activity Type chart]

*Legend:*
- PropertyDetail
- GetHotSheet
- PropertySummary
- SearchUsingLocation
Resource Activity

- Shows where a service is being used
- What is the next Event in the lifecycle?
- Predictive Analytics
Be more specific!
### What an Event Catalog Looks Like

#### Data Dictionary Information

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
<th>Variables</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>PropertyDetail</td>
<td>Detail presentation of a listing suitable for public consumption</td>
<td>NONE</td>
<td>ListingNumber ListingPrice Area Bedrooms Baths Address</td>
</tr>
<tr>
<td>GetHotSheet</td>
<td>Summary of listings that have changed</td>
<td>SinceDate</td>
<td>ListingNumber NewPrice</td>
</tr>
</tbody>
</table>
What else could be in the Catalog?

• UpdateListing
• SearchUsingLocation
• PropertySummary
• RequestShowing
• MakeOffer

It should not be difficult to construct a list of activities
Give me an example!
Theoretical Construct

Event: PropertyDetail
Address: 386 Sycamore

Request

Response

Event: PropertyDetail
Address: 386 Sycamore
Listing Price: $356,000
Bedrooms: 4
Baths: 3

"Show me that"

"OK, here it is"

API

Data Dictionary
Theoretical Construct

“Show me that”

Event: PropertyDetail
Address: 386 Sycamore

Request

“OK, here it is”

Event: PropertyDetail
Address: 386 Sycamore
Listing Price: $356,000
Bedrooms: 4
Baths: 3

Response

Add an optional event argument to the API

Return the opaque Event argument for event handlers
What Does Open Source Mean?

Do it Yourself!
DIY Processing Tools

Asynchronous programming languages for quicker data retrieval

Multi-threading javascript libraries for faster interactions

Images from respective communities listed
DIY Persistence Tools

SQLite

Low overhead database that should be used where speed is an issue

Traditional SQL Database

MariaDB

NoSQL Database that works well with JSON structured data

Images from respective communities listed
DIY Operating Systems

Enterprise grade GNU/Linux

FreeBSD

Low overhead, fast Unix

CentOS

Debian GNU/Linux

(more packages)
This didn’t use the API!
RESO API w/Events: Fast
RESO API w/Events: High Volume

Browser (Javascript) → Request → RESO API Server

PropertyDetail

Response → RESO API Server

Analytics

Activity DB

Images from respective communities listed
Relevance Achieved

- Data Dictionary
- API Transport
- Event Catalog