Towards RESO standard real estate developer platform for MLS and Brokerages

Dr. Umesh Harigopal, Antony Satyadas, and Matt Kumar
SPEAKERS

Umesh Harigopal, PhD
Managing Partner &
Chief Innovation Officer
Innovation Incubator, Inc.

Antony Satyadas
CEO, Managing Partner,
& Co-Founder
Innovation Incubator, Inc.

Matt Kumar
Chairman, Managing
Partner, & Co-Founder
Innovation Incubator, Inc.

Check out our conference app for more information about this speaker and to view the handouts!
Current State of Real Estate Technology Standards

Big Data & Integration
- Disparate Big Data ETL – property, locality, services
- Big Data
- Spatial Enrichment
- Longitudinal Property Record
- Temporal Enrichment
- Digital Consumer Big Data
- News/Social Enrichment
- Dynamic Longitudinal Property Records
- Streaming data integration - IOT

Analytics & Insights
- Operational Reporting
- Ad-hoc Query & Analysis
- Analytics OLAP
- Dashboards
- Static Models
- Dynamic Models

Retrieval & Delivery
- Structured Queries & EDI
- B2B Integration Web Services
- Use Case driven APIs
- Ontology-based APIs

Contextual & Intentional NLP Dialog
- Natural language request and response
- Use context to understand user’s intent and respond with relevant and actionable information
**What have we done with these standards?**

<table>
<thead>
<tr>
<th>DATA</th>
<th>INSIGHTS</th>
<th>APPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS</td>
<td>iEstimate</td>
<td>App Store</td>
</tr>
<tr>
<td>MLSLite</td>
<td>iPriceTrend</td>
<td></td>
</tr>
<tr>
<td>Assessment</td>
<td>CMA Comps</td>
<td></td>
</tr>
<tr>
<td>Recorder's Data</td>
<td>CMA FMV</td>
<td></td>
</tr>
<tr>
<td>FSBO</td>
<td>Best Agents</td>
<td></td>
</tr>
<tr>
<td>Distressed Properties</td>
<td>Best Fit Home</td>
<td></td>
</tr>
<tr>
<td>Public APIs</td>
<td>Match My Home</td>
<td></td>
</tr>
<tr>
<td>Global APIs</td>
<td>Best Fit Investment</td>
<td></td>
</tr>
</tbody>
</table>

**App Store**
Download and use these Apps built using the PropMix Smart App Builder and associated boilerplates.

- **ALL**, **PAID**, **FREE**

**Appraiser App**
Perform custom search around a given radius of a property. Show Analytical information.

**iPrice Trend**
Allows you to follow price trends in a given neighbourhood plotted against time. Prices are measured as Sq.ft/ iEstimate vs month.
RESO Standards Opportunities to accelerate innovation

- **Longitudinal Property Record**
  - Common temporal model for Real Estate properties
  - Single standard canonical model across data sets:
    - Assessment, Recorder, Neighborhood, etc.

- **Standard Real Estate Ontology**
  - Represent RE knowledge for effective querying
  - Enable natural language processing (NLP) frameworks extract ontological structures

- **Reusable Analytical Models**
  - Appraisal Models – improve consistency
  - Real Estate Cognitive Computing framework
Delivering a standards based Cognitive Computing platform

Application Layer

Standard Frameworks & Platform

Cognition Fabric
Insights from unstructured/structured Data Streams
Looking inside the Cognitive Engine

Application Layer

Standard Frameworks & Platform

Realtime Predictive Models
Cognition Fabric
Longitudinal Property Record
Canonical Data Model

Transactional Data
Text
Images
Video

NLP
Image Proc.
Video Proc.
DISCUSSION & QUESTIONS
Thank You

Contact:

Umesh Harigopal – umesh@innovationincubator.com
Antony Satyadas – antony@innovationincubator.com
Matt Kumar – matt@innovationincubator.com