RESO R&D Mobile Data Access Recommendations

The intent of the document is to outline concerns and make recommendations associated with using RETS directly within mobile applications. Many of our recommendations will be best practices while some may require changes to the specification.

There are many business cases associated with mobile data uses and we do not intend to provide recommendations to support all those cases. Instead we are looking at the broadest use case associated with direct data access from the mobile device. The current variety of mobile real estate applications largely rely on an intermediary data repository between the MLS and the handheld device. The reason for this can be manifold, including permissions, licensing requirements and technical limitations within the spec.

With this recommendation we are not addressing the operational and licensing concerns that the data provider may have. We are assuming that the data provider is willing to provide real time mobile access to data, and needs implementation guidelines.

The items we will review are:
1. Transport protocols
2. Security measures
3. Search options
4. Payload options
5. Data fields / Metadata
6. Display options

Transport Protocols

The transport protocol currently provided in the 1.x specifications is insufficient to provide a successful mobile interface. The current recommendation using JSON, REST and OData [more explanations] will be better suited for direct mobile access. We recommend that the RE Data provider implement the new protocols before they attempt to support mobile applications directly.

Security Measures

R&D recommends that all mobile data access be secured behind authentication. Basic HTTP authentication would be sufficient to limit the scope of abuse or at least make it traceable. It will be difficult to manage individual mobile device access rights, we recommend that all active MLS participant classes that the data provider wishes to gain access be provided their own credential set, rather than just one for the app developer. You may wish to implement an application signature (1.x user agent) to help classify the type of traffic in addition to the user. Providing user based credentialing will allow for users to transition from product to product more effortlessly while still allowing the data provider to trace all activity for signs of abuse. encrypt passwords.
Encryption of the data stream can be decided by each of the providers, but not recommended by the R&D group for the typical listing data payload. We feel that the additional development burden is not worth the benefit it provides.

Search Options

When providing direct data access for handheld devices, the search requirements will differ significantly. Verbose criteria with multiselect options will be utilized far less than situational criteria. Options such as lat/long and radius parameters should be supported at a minimum, even if the lat/lng are excluded from the result set. Other options such as polygonal criteria (map view) are strongly recommended for support.

We recommend minimal use of shortcodes as query parameters since there is a high probability that mobile search will not implement picklist based criteria.

Payload Options

As with most search applications, you will need to support two views: summary result sets and single record details. Allowing the mobile device to request a payload by name versus listing all fields to be returned (or asking for all and filtering) will enable a more efficient transaction. Ideally the summary payload will contain a uniform set of fields across all data providers, but at a minimum there should be documentation on the contents of the payloads.

R&D fully recommends that all mobile related payloads be fully compatible with the universal data dictionary currently under development. This will allow app developers to deploy in new markets with minimal redevelopment.

There may be consideration for a map results payload which includes fields necessary for plotting on a map, or the summary results could be expanded to serve both purposes.

Data Fields / Metadata

As mentioned earlier, strict adherence to the data dictionary is strongly recommended for ease of transition from provider to provider. Metadata for mobile applications should not be necessary so that the mobile app will require minimal redevelopment and no need for autodiscovery.

Display Options

If the data payloads are uniform, then there will be minimal need for display hints. If the data provider wishes to offer expanded payload options, R&D recommends implementation of display notes to allow the mobile app to auto display the newly discovered data sets with minimal manual intervention and confusion.