Real Estate Association of Cascadia (“Cascadia”)

Terms of Reference (Extracted from Original Request for Proposal)

December 5, 2007

1. Requirement

Develop an advanced Online Real Estate Information System for the Association.

2. Background

Cascadia is an association of municipal real estate boards, agencies and their member real estate agents across the states of Oregon, Idaho, Washington and the Province of British Columbia. Association headquarters are located in Portland Oregon. Regional boards are located in the greater metropolitan areas of the 10 largest cities across Cascadia. The remaining real estate boards are organized into 40 district offices supporting the agencies in a given area. There are about 16,000 real estate agents, 50 real estate companies and about 150 agencies (real estate offices) across Cascadia.

The association is in the process of integrating operations across the Cascadian landscape to reduce costs, increase customer service and increase margins for its members. Twenty years ago, this industry relied on paper-based real estate listings (multiple listing services), telephones and fax to access information and support transacting real estate offers. In recent years, many of the larger companies and the larger real estate boards have constructed information systems on the web to provide both agents and their customers with online access to real estate listings and standard forms.

However, these systems are incompatible with each other and are surrounded by "walled gardens" that "restrict trade" across board and business boundaries. For example, a real estate agent from an agency in one city is not able to access the details of property listings in another city or in another agency's database. This means that the customer may be forced to go to several agents to get current and detailed information about all available properties meeting his/her requirements. Cascadia means to open up trade across these barriers to increase availability and improve customer service on a wider scale.

The planned new system is intended to cross these boundaries to field a much better, faster, cheaper integrated system that will yield a superior total solution to the one currently in place.

3. Top Level Objectives, Goals and Requirements

The proposing company must clearly demonstrate that it has the capability and corporate maturity to achieve the following high priority objectives:

1. Cascadia's general requirements described below are to be identified, refined and delivered in the operational solution such that real estate agents and operational support staff are able to easily and intuitively use the system in the office, the home, the car and off-site. During the bidding process, the customer will be available at an open bidding conference to respond to queries to clarify functional and system requirements.
2. The system shall support access to real estate information and business transactions from any PC, notebook, Personal Digital Assistant (PDA) or cell phone using e-mail, fax, instant messaging, and short text messaging.
3. The delivered system design and implementation is to be highly reliable, scalable and maintainable by Cascadia's own IT professionals. The qualification process prior to delivery must verify that it meets these system properties through test, demonstration, analysis and/or inspection in accordance with an agreed qualification process.

4. The company shall demonstrate that it is committed, capable and adequately resourced to institute best industry practices for managing tasks and milestones, system scope, risks, system configuration, quality assurance, and contractors.
5. The bidding company must demonstrate that it has the required core competencies to deliver and that it will be able to enhance and maintain the appropriate skills of all technical and management staff assigned to the project.
6. The bidder must present a project organization that is adequately structured to streamline and coordinate project task execution to meet project milestone and delivery schedules. The proposal should provide a staffing profile over the project life cycle.
7. The bid must demonstrate that documentation produced by the project will adequately support ongoing operations, system maintenance, training and hand-over of the system to Cascadia.
8. The proposal must clearly present a top-level architectural design that meets functional requirements, design constraints and performance requirements (responsiveness, security and reliability requirements). The proposal is to show how the proposed architectural design meets all system requirements.
9. A comprehensive system qualification process is to be provided. The bidder must illustrate that this process will validate and verify all system requirements and the process must provide a comprehensive approach for achieving customer acceptance and sign-off.
10. The bidder must provide a compliance checklist that summarizes how all of the objectives, goals and requirements in the RFP will be met.
11. This proposal does not mandate that either a central or distributed hardware architecture be proposed. The system and software architecture is to be developed by the contractor. Nevertheless, the response to this proposal should set out a preliminary architecture which will be a critical element of proposal evaluations.
12. The central real estate system located in Portland is the repository and nervous system for the entire network of regional and district processing. A network of regional and district real estate systems are distributed across Cascadia. The central system shall maintain operating relationships with external real estate systems across the USA and Canada making extensive use of the Internet to access information and provide online access for both real estate agents and their customers. The repository maintains real estate listings and agency, agent and customer data.
13. The system accounting system must be designed to support partial cost-recovery and support the control and sharing of provided services including printing, faxing, messaging, scheduling and forms-management services. At the time of writing, it is not clear how these costs will be recovered (e.g., fixed fees, usage fees, mixed, agents pay, agencies pay, etc.). The proposed design should accommodate a range of recovery methods and the development process should support focusing on a valid subset of cost recovery mechanisms for implementation.
14. This is a preliminary Request for Proposal (RFP) inviting prospective bidders to propose the implementation processes, methods, and tools that will provide Cascadia with the most modern, cost-effective, real estate system of its kind in the world. A subsequent request for proposal will be provided to a short list of two (2) bidders who have demonstrated that they meet the mandatory requirements of this preliminary RFP.
15. The response shall address the make/buy/conversion aspects of this requirement. It should propose and distinguish between those components (hardware, software, and communications) that are COTS (commercial off-the-shelf), custom developed, or modified. Components or services to be leased or rented should be clearly identified, but not priced (although order of magnitude costs may be put forward). In areas where customer-provided equipment or software can be identified, and/or conversion of such components may be required, the bidder shall indicate constraints, assumptions, and requirements that impact on the customer and the project schedule.
16. The submitted proposals will be evaluated with respect to the degree to which technical and management risks associated with constructing the system have been minimized. Cascadia will therefore assess the response with respect to the maturity of the organization and its processes. Although the SEI CMM will not

be used to assess the bidders, each company should be prepared to undergo an SEI assessment and indicate in its response that it is consistent with SEI CMM Level 3 or higher.

17. The requirements for the system are documented in the paragraphs that follow. The customer has chosen to summarize the requirements in terms of a preliminary design and functional requirements, but expects the RFP respondents to propose alternative designs, and/or the process by which the requirements will become fully defined, within the budget and schedule constraints.

4. Functional Requirements

This section describes the requirements that need to be satisfied by the system and its software. The requirements are not yet fully detailed -- the bidder is to provide an implementation plan that adequately refines and specifies system requirements designed to meet Cascadia's business needs and expectations. The following high level requirements specifications provide the essential scope and functionality for the targeted system and will be the basis for acceptance of the proposal as well as the final system to be delivered.

4.1. Identification (A)

4.1.1. Accounts and Logon

The system must be designed to partially recover its costs. User identification through accounts/passwords may be proposed. Innovative proposals that make use of emerging technologies to facilitate usability and access and may lead to operational benefits will receive bonus evaluation points during bid assessment.

4.1.2. Personal Profiles and Preferences

The system is to be able to support personal profiles for agents and their customers. Agent profiles will include personal data, business overview data and user interface device data (PC, laptop, PDA and cell phone). Customer data will generally include customer preferences as they relate to the attributes of the property they are selling or the property they wish to buy. A customer's selling agent will typically enter the listing information (possibly via a PDA or cell phone) and a customer's buying agent will generally enter the attributes of the desired property.

4.2. Primary Application: Real Estate (B)

4.2.1. Database / Repository

The database maintains records of all active real estate listings, users (agents and their customers) as well as transactions (messages, forms and calendar items). One of the current databases is implemented under Oracle 9 in a Linux Redhat environment and offers fairly complete support for Multiple Listing Services (MLS) -- database of real estate listings.

4.2.2. Posting New Listings

The seller's agent will gather the listing information and submit this as a record into the system.

4.2.3. On-Demand Real Estate Searches

The proposed system must be able to support on-demand MLS queries capable of searching for properties throughout the Cascadia network. The end user should not need to know which system(s) hold real estate listings that match search criteria such as location, property type, listing company name, agent, price range or other property attributes.

4.2.4. Real Time Notifications (matching listings)

On behalf of their customers, a buying agent shall be able to enter one or more property requirements (or "requests"). This will normally be advantageous after an on-demand query has not resulted in locating a suitable

property. When a new listing is entered that matches a given customer's request, a real-time notification (alert) is delivered to the buying agent.

4.3. Online Internet Access (C)

In addition to real estate listings, the MLS system provides a directory of referral services for its customers containing qualified lawyers, property inspectors, mortgage brokers, construction and renovation companies, interior decorators, etc. Users (agents in particular) must be provided the facilities needed to locate, browse, and print listings and various related products and services on the Internet.

4.4. Cross-Platform Messaging (D)

The system is to be designed to support intelligent messaging across PCs, PDAs and cells for e-mail, fax, instant messaging (IM) and short text messaging services including Short Messaging Services (SMS) and Wireless Application Protocol (WAP). According to customer preferences, the network will be intelligent enough to choose the most appropriate channel or channels over which to send the message.

4.5. Calendaring (E)

The system is to be able to support cross-platform calendaring and scheduling. Calendars are to be synchronized across PCs, PDAs and cells with minimum user intervention. Web-based as well as user-device-based calendars are to be supported. Scheduling showings should optimize the selection of suitable appointments according to user preferences.

4.5.1. Scheduling

The system is to be able to support the scheduling of real estate showings, that is, appointments that schedule the showing of properties to customers. Transactions to support online scheduling of a given property, the customer and real estate agents are to be supported.

4.5.2. Appointment Reminders

When a showing (appointment) comes due, reminder notices are to be supported by the system. User preferences are to be supported such that notices are routed to the desired device (possibly at the desired location).

4.6. Forms Management (F)

The system is to be able to support forms that may be processed on virtually any platform including PCs, PDAs and cells. The system shall support the following types of forms:

- Selling Agent Agreements
- Listings
- Buying Agent Agreements
- Agreements of Purchase and Sales
- Various standard terms and conditions
- Other attachments

5. Other Requirements

5.1. Performance Requirements

The system shall respond (on average) to a user query or stimulus (either by satisfying the query or by indicating the stimulus was received) within x seconds of the submission of the query (for example, when the enter key is pressed) as follows:

x = 2 secs for local database queries
x = 5 secs for Intranet queries among central, regional, and district sites

5.2. Fault Tolerance Requirements

The central processing system must be designed to be fault tolerant: At least one spare processor, with a complement of secondary storage, will be available to be switched into operation should the primary fail; and the backup for a failed processor in the central processing system will occur within 2 minutes of the detection of the failure. Maximum downtime allowed for the central processing is 8 minutes per year. The system shall be designed to accommodate hardware and software upgrades with no service interruptions.

5.3. Volume and Future Needs

The system shall accommodate usage projections for the next 5 years at a growth rate of 5% per year. The impacts of this planned growth on the scaling of the delivered system should be considered in the proposal.

6. Deliverables Addressed by the Response

At least the following plans and technical documents are to be addressed as deliverables in the proposal. Other plans and technical documents required to complete the work are also to be identified in the proposal.

6.1. Plans

- Project Management Plan (PMP)
- Requirements Management Plan (RMP)
- Software Development Plan (SDP)
- Software Test Plan (STP)
- Software Quality Assurance Plan (SQAP)
- Software Configuration Management Plan (SCMP)

6.2. Technical Documents and Software

- Software Requirements Specification (SRS)
- Software Architecture and Design Document (SADD)
- Software Test Description(s) (STD)
- Software Test Report(s) (STR)
- Software User Manual(s) (SUM)
- Source Code
- Master and Backup CDs with Run-time, install, and read-me instructions.

7. Organization of the Response

The proposal is to address the following areas organized by section as follows:

1. Executive Summary
2. Software Development Process
3. Software Project Management (SPM)
4. Software Requirements Engineering (SRE – Reqts Def. and Change Mgt)
5. Software Architectural Design (SAD)
6. Unit Development, Unit Testing, and Integration (Dev)
7. Software Testing and Customer Acceptance (STCA)
8. Software Quality Assurance (SQA)
9. Software Configuration Management (SCM)