



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 148-2008**

**SUPPLY AND DELIVERY OF A VOICEXML PLATFORM**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 SUPPLY AND DELIVERY OF A VOICEXML PLATFORM

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, March 28<sup>th</sup>, 2008.

B2.2 Bid Submissions determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.

B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. ENQUIRIES**

B3.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.

B3.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.

B3.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.

B3.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.

B3.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

### **B4. ADDENDA**

B4.1 The Contract Administrator may, at any time prior to the Submission deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.

B4.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.

B4.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B4.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Branch internet site for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B4.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

## **B5. SUBSTITUTES**

- B5.1 The Work is based on the materials, equipment, methods and products specified in the Bid Opportunity. Bidders shall offer a Bid Solution including the components defined in: E2.2.1.
- B5.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B5.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least seven (7) Business Days prior to the Submission Deadline.
- B5.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the material, equipment, method or product as either an approved equal or alternative;
  - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
  - (c) identify any anticipated cost or time savings that may be associated with the substitute;
  - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract;
  - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract.
- B5.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B5.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B5.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.
- B5.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B5.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative shall base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B15.
- B5.9 No later claim by the Contractor for an addition to the price(s) because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B5.10 Notwithstanding B5.2 to B5.9, deviations in accordance with B6.6 shall be evaluated in accordance with B15.1(a).

**B6. BID SUBMISSION**

B6.1 The Bid Submission consists of the following components:

- (a) Form A: Bid;
- (b) Form B: Bid Solution Description and Prices Detail;
- (c) Form B: Bid Solution Description and Prices Additional Goods or Items Of Work;
- (d) Form B: Bid Solution Description and Prices Total Bid Price Summary;
- (e) Form B: Bid Solution Description and Prices Extended Descriptions;
- (f) Form C: Bidder Qualification;
- (g) Form C: Bidder Qualification Extended Descriptions;
- (h) Form N: Product Profile;
- (i) Form N: Product Profile Extended Descriptions;
- (j) Form O: Schedule of Maintenance Agreements.

B6.2 All components of the Bid Submission shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely in ink, to constitute a responsive Bid.

B6.3 The Bid Submission may be submitted by mail, courier or personal delivery.

B6.4 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:

The City of Winnipeg  
Corporate Finance Department  
Materials Management Branch  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1

B6.4.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.

B6.5 Bid Submissions submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B6.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B15.1(a).

**B7. BID**

B7.1 The Bidder shall complete Form A: Bid, making all required entries.

B7.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his own name, his name shall be inserted;
- (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
- (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;

- (d) if the Bidder is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

B7.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B7.2.

B7.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

B7.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder;
- (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
- (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

B7.4.1 The name and official capacity of all individuals signing Form A: Bid shall be printed below such signatures.

B7.4.2 All signatures shall be original.

B7.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid Submission and the Contract, when awarded, shall be both joint and several.

## **B8. BID SOLUTION DESCRIPTION AND PRICES**

B8.1 Form B: Bid Solution Description and Prices is a bid submission form that combines a structured itemised description of the Bid Solution and the corresponding schedule of Bid Prices.

B8.1.1 Form B: Bid Solution Description and Prices is designed to enable Bidders to:

- (a) provide a uniform method of describing the Bid Solution;
- (b) respond to the Bid Opportunity with a wide variety of options;
- (c) indicate compliance with Bid Opportunity specifications in an unambiguous nature;
- (d) record itemised Bid Prices that reflect the exact nature of the Bid Solution.

B8.1.2 Form B: Bid Solution Description and Prices enables the City to accurately and equitably evaluate Bids containing dissimilar Bid Solutions.

B8.1.3 Form B: Bid Solution Description and Prices is designed as a decision matrix with the purpose of guiding Bidder responses in a manner that assures that all required information is provided in a structured manner. Bidders shall provide a response for every item in Form B: Bid Solution Description and Prices as required by the logic described in B8.1.3(a) through (f).

- (a) Bidders shall complete the form by starting with Item 1. and providing the requested responses in sequence
- (b) The form contains a number of "yes/no" decision points which are mutually exclusive. Bidders shall check the response applicable to their Bid Solution and shall complete the items included in the branch following the decision point
- (c) Should the selected response result in a Bid Solution that does not meet pass/fail requirements, this is noted in the form.

- (d) When the responses to a decision branch have been completed, Bidders shall continue with the next sequential item following that branch unless otherwise indicated.
- (e) At certain locations in the form a jump to another item may be applicable. This is indicated by an instruction indicated by a downward pointing arrow along with a reference to the item which is to be completed next.
- (f) The form contains several items where multiple choices are possible. Bidders shall complete responses for each of the selected branches.

B8.1.4 Form B: Bid Solution Description and Prices contains entry grids for descriptive information, specification information, compliance indication and Bid Prices. Grids are provided for multiple entry items. Bidders shall complete the number of entries that are applicable to the Bid Solution.

- (a) Grids for the purpose of identifying Goods and Services that comprise the Bid Solution.
- (b) Grids requiring the specification of a Bid Price that will be utilised to evaluate the Bid Solution.

B8.2 Bidders shall complete Form B: Bid Solution Description and Prices – Detailed Schedule such that the response provides a full description of the Bid Solution.

- (a) Form B: Bid Solution Description and Prices – Detailed Schedule shall be completed to clearly identify the options represented by the Bid Solution and the Bid Prices required to implement it.
- (b) Bidders shall indicate compliance with the Bid Opportunity specifications as defined in PART E - SPECIFICATIONS by answering the Yes/No questions in Form B: Bid Solution Description and Prices – Detailed Schedule and the subsequent response items in the form that correspond to the Yes/No choice, or shall state any deviation. Deviations shall be clearly stated and fully detailed by completion of an Extended Description entry in Form B: Bid Solution Description and Prices – Extended Descriptions.
- (c) Where applicable, Bidders shall identify all components and the quantities required to implement the Bid Solution whether the Bidder proposes to supply the items or not.
- (d) Where the Bidder is able to supply the component and proposes to do so, on the Form B: Bid Solution Description and Prices – Detailed Schedule, the Bidders shall:
  - (i) identify the component and the quantities required to implement the Bid Solution;
  - (ii) quote the price for the purchase of item or its license fee;
  - (iii) prices quoted will meet the criteria defined in B8.5.
- (e) For Bid Solution components that have an associated on-going maintenance and/or support cost, Bidders shall indicate the periodic price for these items where indicated on the Form B: Bid Solution Description and Prices – Detailed Schedule.

B8.3 Bidders may propose an overall Bid Solution that includes components which the Bidder cannot directly supply.

- (a) For items that are required for the Bid Solution and which the Bidder cannot or proposes not to supply, the Bidder shall provide the detail specification for the component in the Form B: Bid Solution Description and Prices – Detailed Schedule.
- (b) The City will independently determine the acquisition costs of these items from a third party source.
- (c) The cost to the City of independently acquiring external components required to implement the proposed Bid Solution will be added to the Total Bid Evaluation Cost.

B8.4 Form B: Bid Solution Description and Prices – Detailed Schedule as published for this Bid Opportunity may not reference all Goods and/or Items of Work that are necessary to enable a specific Bid Solution. In these circumstances, Bidders shall:



- (a) identify any required Goods and/or Items of Work not specifically identified in Form B: Bid Solution Description and Prices – Detailed Schedule separately on Form B: Bid Solution Description and Prices - Additional Goods or Items of Work;
  - (b) provide a detailed description of the function and/or specifications for these Goods and/or Items of Work as Extended Descriptions on Form B: Bid Solution Description and Prices – Extended Descriptions.
  - (c) specify prices for these items on Form B: Bid Solution Description and Prices - Additional Goods or Items of Work if the Bidder is proposing to supply the item.
- B8.5 Prices on Form B: Bid Solution Description and Prices shall include:
- (a) duty;
  - (b) freight and cartage;
  - (c) Provincial and Federal taxes [except the Goods and Services Tax (GST) and Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable] and all charges governmental or otherwise paid;
  - (d) profit and all compensation which shall be due to the Contractor for the Work and all risks and contingencies connected therewith.
- B8.6 Bidders shall determine the quantities of Goods and/or Items of Work based on a Bid Solution that is sized and configured to meet the Performance criteria set out in E2.4 and Availability criteria specified in E2.5.1 of PART E - SPECIFICATIONS.
- B8.7 The quantities identified by the Bidder on Form B: Bid Solution Description and Prices – Detailed Schedule and Form B: Bid Solution Description and Prices - Additional Goods or Items of Work will be used:
- (a) for the purpose of comparing Bid Solutions providing the specified Performance and Availability;
  - (b) as a guide for the actual quantities that will be awarded for the selected Bid Solution.
- B8.8 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.
- B8.9 Bidders shall summarize the Total Bid Price for all mandatory Goods and/or Items of Work and for Goods and/or Items of Work that the Bidder proposes to supply.
- (a) All total price items identified in Form B: Bid Solution Description and Prices – Detailed Schedule and Form B: Bid Solution Description and Prices - Additional Goods or Items of Work shall be carried forward and totalled on Form B: Bid Solution Description and Prices – Total Bid Price Summary.
  - (b) In the case of a discrepancy, the amounts indicated in Form B: Bid Solution Description and Prices – Detailed Schedule and Form B: Bid Solution Description and Prices - Additional Goods or Items of Work will be used for evaluating the Bid.
- B8.10 For the purpose of illustrating the method the City will use to determine the Total Bid Evaluation Cost, Form B: Bid Solution Description and Prices – Total Bid Price Summary includes items which may not be available through the Bidder or which the Bidder is not proposing to supply.
- (a) Bidders shall not make any entries on Form B: Bid Solution Description and Prices – Total Bid Price Summary for such items.
  - (b) The City shall determine the cost of items not supplied by the Bidder independently and, if required for the Bid Solution, will add this cost to the Total Bid Evaluation Cost.

**B9. BID FORMS COMPLETION**

B9.1 Bidders are advised that independent of how the Bid Submission forms are completed, they shall be submitted in accordance with B6:

Bid Submission.

- B9.2 The Bid Submission forms specified in B6.1 may be completed manually.
- (a) Where insufficient room is provided in the form for longer descriptive entries, Bidders may create separate documents in response which are included as Extended Descriptions to the form.
    - (i) Each such document will contain a reference indicating the item number in the form that it is in response to.
    - (ii) Each document added as an Extended Description to the form will be listed in Extended Descriptions Index applicable to the form.
- B9.3 The Bid Submission forms specified in B6.1 may be completed by electronic means; however, a **printed version of each form (hard copy)** must be submitted in accordance with B6.
- (a) The forms constituting the Bid Submission are provided in electronic Portable Document Format (PDF).
    - (i) The PDF forms contain form fields that enable their completion using a “full version” of the Adobe™ Acrobat software.
    - (ii) Descriptive entries are designed as multi-line scrolling text fields. Bidders are cautioned that since the completed form must be submitted in printed form, textual entries must not exceed field sizes.
    - (iii) Decision selection fields are designed as “check boxes”. These may be completed in Acrobat by simply pointing and clicking on the appropriate response.
    - (iv) Number quantitative and Bid Price entries are represented by numeric fields with appropriate punctuation.
  - (b) Certain entries on the forms requiring descriptive textual responses may not be sized sufficiently to contain the complete information.
    - (i) Bidders may provide responses on separate documents as indicated in B9.2(a)
    - (ii) Bidders may utilize the Bid Submission Extended Descriptions Microsoft™ Word template to record responses that do not fit within the existing forms. This document contains the appropriate references back to the original forms and automates the generation of the Forms Extended Descriptions Indices. Bidders are reminded that the resulting documents need to be submitted in printed form with original signatures.

**B10. BIDDER QUALIFICATION**

- B10.1 The Bidder shall:
- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Bidder does not carry on business in Manitoba, in the jurisdiction where the Bidder does carry on business;
  - (b) be responsible and not be
  - (c) suspended, debarred or in default of any obligation to the City;
  - (d) be financially capable of carrying out the terms of the Contract;
  - (e) have all the necessary experience, capital, organisation, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract;
  - (f) have successfully carried out work, similar in nature, scope and value to the Work;
  - (g) employ only Subcontractors who:
    - (i) are responsible and not suspended, debarred or in default of any obligation to the City (a list of suspended or debarred individuals and companies is available on the

Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>); and

- (ii) have successfully carried out work similar in nature, scope and value to the portion of the Work proposed to be subcontracted to them, and are fully capable of performing the Work required to be done in accordance with the terms of the Contract;
- (iii) have a written workplace safety and health program in accordance with The Workplace Safety and Health Act (Manitoba);

B10.2 The Bidder shall complete Form C: Bidder Qualification.

- (a) The Bidder shall provide an organisational summary by completing the appropriate entries in Form C: Bidder Qualification.
- (b) The Bidder shall provide a minimum of three reference clients with existing implementations of solutions similar in size, scope and nature to that proposed in the Bid Solution by completing Form C: Bidder Qualification 9.

B10.3 The Bidder shall be prepared to submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B10.4 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

## **B11. BID SOLUTION QUALIFICATION/FORM N/FORM O**

B11.1 The Bidder shall:

- (a) undertake to propose a Bid Solution that consists of mature, industry proven products that are well established in the marketplace for VoiceXML products;
- (b) propose only products in the Bid Solution that to the best of the Bidder's current knowledge, will be supported for a minimum of seven years from the award of contract;
- (c) propose only products which are not to be superseded by replacement products within the next two years; unless a clear migration path will be provided to the follow-on product that will not result in additional cost to the City;
- (d) propose only products in the Bid Solution for which there is a proven background of maintenance and support, where a vendor-provided support structure will exist a minimum of seven years from the date of award.

B11.2 The Bidder shall, for the products proposed in the Bid Solution, provide a synopsis of the product history and future plans for the products by completing Form N: Bidder Product Profile.

B11.3 The Bidder shall provide a list of a minimum of six installations of the proposed products in solutions similar in size, scope and nature to that proposed in the Bid Solution by completing Form N: Bidder Product Profile.

B11.4 Bidders shall provide all details applicable to maintenance agreements for each component proposed in the Bid Solution on Form O: Schedule of Maintenance Agreement and in accordance with E2.11.

## **B12. OPENING OF BIDS AND RELEASE OF INFORMATION**

B12.1 Bid Submissions will not be opened publicly.

B12.2 After the Submission Deadline, the names of the Bidders and their bid prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of

Winnipeg, Corporate Finance, Materials Management Branch internet site at  
<http://www.winnipeg.ca/matmgt>.

B12.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B12.4 The Bidder is advised that any information contained in any Bid Submission may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

### **B13. IRREVOCABLE BID**

B13.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.

B13.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work for the time period specified in Paragraph 9 of Form A: Bid.

### **B14. WITHDRAWAL OF BIDS**

B14.1 A Bidder may withdraw his Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B14.1.1 Notwithstanding GC.7.05(2), the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.

B14.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

B14.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials shall:

- (a) retain the Bid Submission until after the Submission Deadline has elapsed;
- (b) open the Bid Submission to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and
- (c) if the notice has been given by any one of the persons specified in B14.1.3(b), declare the Bid withdrawn.

B14.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B13.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

### **B15. EVALUATION OF BIDS**

B15.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Bid Opportunity and degree of compliance with specifications or acceptable deviation therefrom (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
- (c) Bid Solution (Overall VoiceXML Platform) fit, quality and completeness; ..... 50%
- (d) Bidder specified solution evaluation options pursuant to E2.6 ..... 10%
- (e) Total Bid Evaluation Cost ..... 40%

- B15.2 Further to B15.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid Submission is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements if the interests of the City so require.
- B15.3 Further to B15.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid Submission or in other information required to be submitted, that he is responsible and qualified.
- B15.4 Further to B15.1(c), it is the intent of the City to provide the highest possible quality voice applications to better serve the citizens of Winnipeg. The City will evaluate quality of the interaction between the users of the Transit IVR applications as provided by the VoiceXML Platform proposed in the Bid Solution. The City will select the platform that provides the best relative combination of quality, performance and cost. The City shall apply the criteria defined in PART E - SPECIFICATIONS E2.6.2 Platform Analysis to determine the overall VoiceXML Platform fit, quality and completeness relative ranking.
- B15.5 Further to B15.1(d), the Bidder shall provide an opportunity for the City to carry out an evaluation of the Bid Solution utilising a prototype of the target TeleBus IVR application.
- (a) In order to enable Winnipeg Transit to effectively evaluate the proposed VoiceXML Platform including the Text-to-Speech and Automated Speech Recognition functions, the Bidder shall provide a test/demonstration facility that uses the exact features contained in the Bid Solution, including the ability to test both English and French (en-US/fr-CA) TTS and ASR performance.
  - (b) Winnipeg Transit will utilise a VoiceXML 2.0 based prototype of the "TeleBus" IVR application to test features of the proposed Platform.
  - (c) The Winnipeg Transit prototype application may not be fully compliant with all standards required to be supported by the Bid Solution. Any inconsistencies and/or deficiencies in the prototype will not be used as a detriment to the evaluation of the proposed platform.
- B15.6 Further to B15.1(e), the City will determine Total Bid Evaluation Cost
- B15.6.1 The Total Bid Evaluation Cost shall consist of:
- (a) the sum of the Bid Price for the Core Platform at the quantities specified by the Bidder for the Bid Solution (specified as Total: A on Form B: Bid Solution Description and Prices – Total Bid Price Summary); plus
  - (b) the sum of the Bid Price for the optionally supplied components required for the Bid Solution and bid for supply by the Bidder (specified as Total: B on Form B: Bid Solution Description and Prices – Total Bid Price Summary); plus
  - (c) the sum of the cost for the optionally supplied components as determined by Winnipeg Transit required for the Bid Solution identified by Winnipeg Transit for supply by a third party (specified as Total: C on Form B: Bid Solution Description and Prices – Total Bid Price Summary); minus
  - (d) the sum of the Bid Price for the optionally supplied components required for the Bid Solution and bid for supply by the Bidder that will not be awarded to Bidder but instead will be supplied by a third party (specified as Total: E on Form B: Bid Solution Description and Prices – Total Bid Price Summary).
- B15.6.2 Where the City chooses to acquire an optionally supplied component from a source other than the Bidder; because the Bidder cannot supply said component, or the City determines it more advantageous to acquire the said component independently from a third party, the City will use the same cost for comparable items to evaluate all responsive Bid Solutions.
- B15.7 This Contract may be awarded as a whole or in part as required to enable the Bid Solution identified on Form B: Bid Solution Description and Prices – Detailed Schedule .
- B15.7.1 The Bidder shall Bid on all Goods and/or Items of Work defined as the Core Platform.

- B15.7.2 The Bidder shall Bid on all Goods and/or Items of Work defined as Optionally Supplied Required Components, which the Bidder has identified as a requirement for the Bid Solution and for which the Bidder is the sole source of supply.
- B15.7.3 The Bidder may, but is not required to Bid on Goods and/or Items of Work defined as Optionally Supplied Required Components, which the Bidder has identified as a requirement for the Bid Solution, that are available through third parties.
- B15.7.4 The City reserves the right to procure Goods and/or Items of Work , which the Bidder has identified as a requirement for the Bid Solution, that are commodity items for which the City has existing Standing Orders from the Suppliers to whom these Standing Orders have been awarded.
- B15.7.5 The City shall not be obligated to award any item to the responsible Bidder submitting the lowest evaluated responsive Bid for that item and shall have the right to choose the alternative which is in its best interests. If the Bidder has not bid on all alternatives components, he shall have no claim against the City if his partial Bid is rejected in favour of an award of the Contract on the basis of an alternative or item upon which he has not bid.

## **B16. AWARD OF CONTRACT**

- B16.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B16.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B16.2.1 Without limiting the generality of B16.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
  - (b) the prices are materially in excess of the prices received for similar work in the past;
  - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
  - (d) only one Bid is received; or
  - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B16.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid.
- B16.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.
- B16.4 Notwithstanding GC.3.01 and GC.3.02, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B16.5 The Contract Documents, as defined in GC.1.01(7), in their entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that they are not necessarily attached to or accompany said Purchase Order.

## **PART C - GENERAL CONDITIONS**

### **C1. GENERAL CONDITIONS**

C1.1 The *General Conditions for the Supply and Delivery of Goods* (Form 21: 88 03) are applicable to the Work of the Contract.

C1.1.1 The *General Conditions for the Supply and Delivery of Goods* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.



## PART D - SUPPLEMENTAL CONDITIONS

### GENERAL

#### D1. GENERAL CONDITIONS

- D1.1 In addition to the *General Conditions for the Supply and Delivery of Goods*, these Supplemental Conditions are applicable to the Work of the Contract.
- D1.2 The General Conditions are amended by striking out "The City of Winnipeg Act" wherever it appears in the General Conditions and substituting "The City of Winnipeg Charter".
- D1.3 The General Conditions are amended by striking out "Board of Commissioners" or "Commissioner" wherever it appears in the General Conditions and substituting the "Chief Administrative Officer".
- D1.4 The General Conditions are amended by striking out "Tender Package" wherever it appears in the General Conditions and substituting "Bid Opportunity".
- D1.5 The General Conditions are amended by striking out "Tender Submission" wherever it appears in the General Conditions and substituting "Bid Submission".
- D1.6 The General Conditions are amended by striking out "Bidding Instructions" wherever it appears in the General Conditions and substituting "Bidding Procedures".

#### D2. SCOPE OF WORK

- D2.1 The Work to be done under the Contract shall consist of the provision of software and/or middleware and/or hardware components necessary to implement a VoiceXML platform for Winnipeg Transit's interactive voice applications.
- D2.2 The major components of the Work are as follows:
- (a) provision of a complete Turn-Key VoiceXML Platform "Appliance", or
  - (b) provision of a modular component based VoiceXML Platform consisting of:
    - (i) the VoiceXML Interpreter, and
    - (ii) the components required to enable high quality speech synthesis, and
    - (iii) the components required to enable high accuracy automated speech recognition, and
    - (iv) any additional components required to enable the VoiceXML Platform, and
  - (c) provision of any training, installation, implementation and consulting services required for Winnipeg Transit to implement the proposed Bid Solution.

#### D3. DEFINITIONS

- D3.1 When used in this Bid Opportunity:
- (a) "**ASR**" means Automated Voice Recognition applications which translate spoken language audio signals into machine readable text based on a predefined grammar.
  - (b) "**Bid Solution**" means the sum of all goods and services required to implement the VoiceXML Platform being proposed by the Bidder.
  - (c) "**Business Day**" means any Calendar Day, other than a Saturday, Sunday, or a Statutory or Civic Holiday;
  - (d) "**Confirm**" means the Winnipeg Transit public Handi-Transit IVR confirmation application which provides confirmation and pick-up detail information to callers dialling a central telephone number who have previously requested a trip via Winnipeg Transit's Para-Transit operation.

- (e) “**Core Platform**” means the VoiceXML Interpreter component and any professional services related to the installation, configuration and training for the VoiceXML Interpreter.
- (f) “**DTMF**” means Dual-tone multi-frequency which is used for telephone signalling over the line in the voice-frequency band. DTMF used for telephone tone dialling is commonly known by the trademarked term Touch-Tone.
- (g) “**IVR**” means Interactive Voice Response application which enables a caller placing a voice telephone call to a specified telephone number to interact with the computer application via voice or key pad entries ;
- (h) “**Modular VoiceXML Platform**” means a VoiceXML Platform that consists of multiple separately configurable hardware, software and middleware components.
- (i) “**MRCP**” means Media Resource Control Protocol which is an Internet Engineering Task Force (IETF) standard communication protocol for the interaction with speech synthesis and speech recognition systems.
- (j) “**Optionally Supplied Required Components**” means those components of the VoiceXML Platform identified by the Bidder that are necessary for the functioning of the Bid Solution; where the Bidder may not be able to supply said component, or chooses not the Bid on the supply of the component.
- (k) “**PSTN**” means the Public Switched Telephone network which provides analog and digital switched line telephone service across fixed line and wireless networks. PSTN is differentiated from VoIP in that it does not utilise the world’s internet protocol based packet switched network.
- (l) “**SIP**” means Session Initiation Protocol which is an application-layer control protocol widely used in signalling for Voice over IP.
- (m) “**SSML**” means Speech Synthesis Markup Language which is an XML-based mark-up language for speech synthesis applications. SSML is often embedded in VoiceXML scripts to drive interactive telephony systems.
- (n) “**Submission Deadline**” and “**Time and Date Set for the Final Receipt of Bids**” mean the time and date set out in the Bidding Procedures for final receipt of Bids;
- (o) “**TeleBus**” means the Winnipeg Transit public IVR application which provides next departing service information to callers dialling a central telephone number and identifying a target bus stop location.
- (p) “**Total Bid Evaluation Cost**” means the total Bid Solution cost as determined by Winnipeg Transit. This cost is determined by the calculation of: (Total Bid Price) minus (Bid Price of Optionally Supplied Required Components that Winnipeg Transit chooses to acquire independently from third parties) plus (Cost of Optionally Supplied Required Components that the Bidder has not proposed to supply) plus (Any additional costs required to implement the Bid solution that are unique to that Bid Solution).
- (q) “**Total Bid Price**” means the total price for all the components of the Bid Solution including; the Core Platform, the Optionally Supplied Required Components, any Professional Services and any Additional Goods and Services that the Bidder is bidding on supplying.
- (r) “**TTS**” means Text-To-Speech speech synthesis functions which translate machine readable text into spoken language audio voice output.
- (s) “**VoiceXML Appliance**” means a turn-key VoiceXML Platform that integrates all hardware, software and middleware components required to deliver the function of a VoiceXML interpreter. This appliance may contain integrated ASR, TSR and PSTN telephone interface components.
- (t) “**VoiceXML Interpreter**” also known as “**VoiceXML Browser**” means the automated system that interprets VoiceXML and translates these into the functions required to undertake an automated dialog with a human through a voice based telephone connection.
- (u) “**VoiceXML Platform**” means the sum of all components required to enable the specified automated voice processing functions described in this Bid Opportunity. The VoiceXML Platform includes the VoiceXML Interpreter

- (v) "**VoiceXML**" also known as "**VXML**" means Voice Extensible Mark-up Language, the World Wide Web Consortium (W3C) standard Extensible Markup Language (XML) format for specifying interactive voice dialogues between a human and a computer.
- (w) "**VoIP**" means Voice over Internet Protocol which is a protocol optimized for transmission of voice through the Internet or other packet switched networks.

#### **D4. CONTRACT ADMINISTRATOR**

- D4.1 The Contract Administrator is:
- Herbert Vossler  
Manager of Information Systems  
Winnipeg Transit  
421 Osborne Street  
Winnipeg, MB, R3L 2A2
- Telephone No. (204) 986-2358  
Facsimile No. (204) 986-6728

#### **D5. NOTICES**

- D5.1 GC.7.05 is hereby amended to delete reference to "registered mail" and to replace same with "ordinary mail".
- D5.2 GC.7.05 is further amended hereby to include delivery by facsimile transmission (fax) as an acceptable means of delivering notices, consents, approvals, statements, authorizations, documents or other communications required or permitted to be given under this Contract. Deliveries by fax will be deemed to have been received on the day of delivery, if a business day, or if not a business day, on the business day next following the day of delivery.
- D5.3 Further to GC.7.05, all notices, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.4, D5.5 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1(a).1.
- D5.4 All notices of appeal to the Chief Administrative Officer shall be sent to the Chief Financial Officer at the following address or facsimile number:
- The City of Winnipeg  
Chief Administrative Officer Secretariat  
Administration Building, 3rd Floor  
510 Main Street  
Winnipeg MB R3B 1B9  
Facsimile No.: (204) 949-1174
- D5.5 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following address or facsimile number:
- The City of Winnipeg  
Corporate Services Department  
Legal Services Division  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1  
Facsimile No.: (204) 947-9155

## **SUBMISSIONS**

### **D6. AUTHORITY TO CARRY ON BUSINESS**

- D6.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

## **SCHEDULE OF WORK**

### **D7. COMMENCEMENT**

- D7.3 The Contractor shall not commence any Work until he is in receipt of a Purchase Order authorizing the commencement of the Work.

### **D8. FORFEITURE OF CONTRACT**

- D8.3 Notwithstanding GC.8.02 (1) and GC.8.02 (3), the City shall have the full right and power to take the whole of the Work, or any part or parts thereof, out of the hands of the Contractor, without process or action at law, upon giving the Contractor written Notice.

### **D9. TOTAL PERFORMANCE**

- D9.3 The Contractor shall achieve Total Performance within twenty one (21) consecutive Calendar Days of the commencement of the Work as specified in D11.

## **MEASUREMENT AND PAYMENT**

### **D10. PAYMENT**

- D10.3 Further to GC.9.03, the City may, at its option, pay the Contractor by direct deposit to the Contractor's banking institution.

### **D11. PAYMENT SCHEDULE**

- D11.3 Further to GC.9.01 and GC.9.03, payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice.

## **INDEMNITY**

### **D12. INDEMNITY**

- D12.1 Notwithstanding GC.7.03, the Contractor shall indemnify the City in the amount of two million dollars (\$2,000,000), plus a minimum of twice the Contract value.

### **D13. WARRANTY**

- D13.1 Warranty is as stated in GC.10.1

## PART E - SPECIFICATIONS

### GENERAL

#### E1. INTRODUCTION

E1.1 Winnipeg Transit has the mandate to provide public transportation service for the citizens of the City of Winnipeg. Winnipeg Transit operates both a fixed route service using diesel coaches as well as demand responsive Para-Transit services utilising contractors. Interactive Voice Response (IVR) systems are a significant component of the information infrastructure used to deliver service information to Winnipeg Transit customers. Currently two (2) major IVR applications; "TeleBus" and "Confirm" are deployed.

E1.2 Current Interactive Voice Response (IVR) Applications

E1.2.1 "TeleBus" provides telephone based voice access to current and future departure time information at any Winnipeg bus stop through a single telephone number (287-RIDE) based on selection of publicly known stop number identifiers. This application has the following characteristics:

- (a) Current Application
  - (i) "TeleBus" is a custom application developed by Winnipeg Transit;
  - (ii) It exploits access to a central service data repository located on Transit's iSeries host computers through common interfaces shared with other customer information applications;
  - (iii) The application utilises older IBM DirectTalk middleware;
  - (iv) Voice services are provided through pre-recorded vocabulary stored in sound files;
  - (v) Typical "TeleBus" transactions are relatively simple with the user required to enter a five-digit number corresponding to a bus stop, next/future indicator, and optionally the day, time and route identifiers. The system responds with the next three (3) passing times at the requested stop;
  - (vi) "TeleBus" vocabulary is complex due to the utilisation of many proper names for route and stop identification.
- (b) Telephone Infrastructure
  - (i) Telephone services are provided by MTS Allstream, a local service provider;
  - (ii) MTS provides a capacity of fifty one (51) dedicated analog trunks for the purposes of "TeleBus";
  - (iii) Distribution of calls to these trunks from the single "TeleBus" telephone access number occurs in a "first available" fashion through MTS.
- (c) "TeleBus" IVR Infrastructure
  - (i) "TeleBus" is implemented on four parallel standard Intel based servers;
  - (ii) IBM DirectTalk is installed on Windows NT 4.0 to provide "TeleBus" functionality;
  - (iii) Media interface to the analog telephone network is provided for by one 16 port Intel Dialogic D/160SC-LS analog loop start voice board per IVR server;
  - (iv) Interfaces to the iSeries host are provided by via Emulator High Level Language API (EHLLAPI) in the IBM Host Access Client product.
- (d) System Utilisation
  - (i) "TeleBus" is a high volume application that has experienced peak periods of fifty thousand (50,000) calls per day with sustained loads of more than three thousand (3,000) calls per hour;
  - (ii) Volumes on a typical weekday are in the range of fifteen to twenty thousand (15,000 - 20,000) calls per twenty four (24) hour period.

- E1.2.2 The Handi-Transit “Confirm” IVR application provides Winnipeg Transit’s Para-transit customers detailed information as to the scheduling status of trips that they had previously requested. The application speaks the details of the requested trips including origin and destination address information, the scheduled pick-up and drop off times as well as identification of the contractor providing the service. The application is interactive and allows the customer to verify the confirmation of the trip. This application has the following characteristics:
- (a) Current Application
    - (i) “Confirm” is a custom application developed by Winnipeg Transit;
    - (ii) “Confirm” derives the required trip status information from the main Handi-Transit reservation and scheduling application “iRide”. “iRide” is implemented on IBM iSeries host servers;
    - (iii) The application utilises IBM WebSphere Voice Response (V3.5) middleware;
    - (iv) Voice services are provided through pre-recorded vocabulary stored in sound files;
    - (v) “Confirm” IVR transactions are relatively complex. Users are required to identify themselves via their Handi-Transit registration PIN. A confirmation of the identity is provided by speaking the customer name. The IVR system speaks the trip details for every trip segment requested for the day in question. This information includes pick-up and drop off location and request time information. A message as to the actual pick-up time is spoken and the contractor providing the service is identified. The customer is provided with the option of confirming the pick-up or rejecting the pick-up through interaction with the phone keys;
    - (vi) “Confirm” vocabulary is complex due to the utilisation of many proper names for address, contractor and customer name identification.
  - (b) Telephone Infrastructure
    - (i) Telephone services are provided by MTS Allstream, a local service provider;
    - (ii) MTS provides a capacity of twelve (12) dedicated analog trunks for the purposes of “Confirm”;
    - (iii) Distribution of calls to these trunks from the single “Confirm” telephone access number occurs through an automated call distribution queue (ACD) in a round-robin fashion through the MTS provided Centrex PBX system.
  - (c) “Confirm” IVR Infrastructure
    - (i) “Confirm” is implemented on two parallel standard Intel based servers;
    - (ii) IBM WebSphere Voice Response is installed on Windows 2000 to provide “Confirm” functionality;
    - (iii) Media interface to the analog telephone network is provided for by one 12 port Intel Dialogic D/120JCT-LS analog loop start voice board per IVR server;
    - (iv) Interfaces to the iSeries host are provided by via the EHLLAPI interface in the IBM Host Access Client product.
  - (d) System Utilisation
    - (i) “Confirm” call volumes average one thousand six hundred (1,600) calls daily;
    - (ii) Typical call duration is approximately two (2) minutes;
    - (iii) The majority of calls are concentrated in a six (6) hour window corresponding to the end of the scheduling cycle;
    - (iv) Peak volumes result in three hundred fifty (350) to four hundred (400) calls per hour.

### E1.3 New (Target) Interactive Voice Applications

#### E1.3.1 “TeleBus” System Replacement

- (a) Winnipeg Transit is in the process of implementing a state-of-the-art automated vehicle location system on its entire fleet of diesel coaches. This system in

conjunction with the back-end control center applications and Transit's suite of service data applications will make it possible to report actual real-time schedule deviation information to customers through its information systems. Although the existing "TeleBus" IVR application is capable of reporting real-time schedule deviation information, given the obsolescence of the existing hardware and middleware platforms Transit is undertaking to reengineer its entire suite of IVR applications;

- (b) Winnipeg Transit's service information infrastructure is in the process of being redeveloped to support a service oriented architecture (SOA) approach. In future all service information inquiries will be handled by a full suite of web services interfaces providing data in a standard XML format;
- (c) In conjunction with this development, the service information public interface applications are being redeveloped to support the XML based SOA architecture;
- (d) The target "TeleBus" application will exploit the web services back-end and will provide a VoiceXML based interface. This new application is VoiceXML 2.0 compliant;
- (e) The new application will take advantage of both text-to-speech functionality as well as automated speech recognition;
- (f) Future plans for the enhanced "TeleBus" application call for incorporation of more complex stop location functions. Voice access to the Transit Navigo trip planner functions will be provided. These features will result in transactions that are substantially more complex with a much more diverse vocabulary requirement;
- (g) The VoiceXML Platform that is the subject of this Bid Opportunity will provide the "front-end" to this new "TeleBus" IVR application. It will communicate with "TeleBus" on a standard TCP/IP network utilising the hypertext transmission protocol (HTTP). To facilitate this interface, the VoiceXML Platform shall conform to the specifications in this section.

#### E1.3.2 "Confirm" System Replacement

- (a) In conjunction with the replacement of "TeleBus", Winnipeg Transit is seeking to consolidate its interactive voice technologies on a single standard platform and language base;
- (b) The Handi-Transit "Confirm" application will be redeveloped to use an identical architecture to the new "TeleBus" application. This will include:
  - (i) Standard VoiceXML 2.0 interface to the front-end;
  - (ii) Incorporation of text-to-speech functionality;
  - (iii) Incorporation of automated speech recognition;
  - (iv) Access to "back-end" data via a web services XML interface.
- (c) To facilitate the new "Confirm" application, the Transit "iRide" Handi-Transit scheduling and reservation system will be modified to provide a web service interface;
- (d) Future plans for "Confirm" include the option for the booking of Hand-Transit trip requests via the IVR functions;
- (e) Functions are also planned to have "Confirm" automatically initiate calls and speak trip confirmation data to clients who have registered for this service.

**E1.3.3 Combined IVR Telephone Infrastructure**

- (a) Winnipeg Transit is seeking to combine the capacity of the incoming telephone trunks and to make them available to both the new “TeleBus” and “Confirm” applications. The usage profile of the trunks currently allocated to each system is such that at peak utilisation for each application, trunks on the other system remain unused or underutilised;
- (b) In combining the capacity of the incoming telephone lines, the existing telephone numbers for each application need to be kept the same as those currently in use.
  - (i) TeleBus: 287-RIDE (7433) (Non-Centrex)
  - (ii) Confirm: 986-5711 (Centrex)

**E2. WORK DEFINITION**

E2.1 The Contractor shall supply and deliver a VoiceXML Platform that:

- (a) Enables the concepts described in E1.;
- (b) At a minimum meets the detail specifications in this section (E2 Work Definition);
- (c) Shall be capable of being integrated into Winnipeg Transit’s information technology infrastructure as illustrated in E3.1 IVR Component Diagram.

E2.2 The required VoiceXML Platform encompasses a number of distinct components. Bidders shall provide a Bid Solution that addresses the requirements of all the components. The City will consider solutions represented by a Turn-Key Hardware/Software VoiceXML “Appliance” that incorporates all or some of the components, or modular solutions based on a combination of products addressing the components.

E2.2.1 Bidders shall submit one or more Bid Solutions only for the component combinations indicated in Table E: i.

	PSTN Telephone Infrastructure		PSTN Telephone Interface		TTS		ASR	
	Existing Analog	Digital	Integrated	VoIP/SIP Gateway	Integrated	External (MRCP)	Integrated	External (MRCP)
VoiceXML Appliance	X		X		X		X	
		X	X		X		X	
	X			X	X		X	
		X		X	X		X	
	X		X			X		X
		X	X			X		X
	X			X		X		X
Modular VoiceXML Platform		X		X		X		X
		X	X		X		X	
	X			X	X		X	
		X		X	X		X	
	X		X			X		X
		X	X			X		X
	X			X		X		X
	X		X		X		X	

**Table E: i**



- E2.2.2 Bidders proposing Bid Solutions that deviate from the combinations in Table E: i must obtain approval for “approved alternatives” as per B5. Substitutes of the Bidding Instructions.
- E2.2.3 Bidders proposing a Modular Hardware/Middleware/Software Solution shall propose components deployable on one or more standard Intel/AMD hardware platforms using Windows Server 2003 or Windows XP Professional or Linux operating systems.
- (a) If this option is bid, the contract shall identify the number of Intel/AMD servers that will be required to meet the capacity requirements identified in E2.4. The Bidder shall not include the cost of the server hardware in Form B: Bid Solution Description and Prices – Detailed Schedule . The Bidder shall provide the detail specifications for these servers in Form B: Bid Solution Description and Prices – Detailed Schedule : 3 Intel/AMD server hardware requirements The City will acquire these systems through contractual Standing Orders already in place for these equipment types. The City will add the cost of acquiring this item independently to the Total Bid Evaluation Cost.
  - (b) The Bidder shall identify the operating systems and versions thereof which are compatible with the proposed Platform in Form B: Bid Solution Description and Prices – Detailed Schedule The cost of the operating system shall not be included in Form B: Bid Solution Description and Prices – Detailed Schedule . The City will acquire these systems through contractual Standing Orders already in place for these products. The City will add the cost of acquiring these items independently to the Total Bid Evaluation Cost.
  - (c) If any additional middleware which is not a component of the Platform or the operating system is required for the operation of the Platform, the Bidder shall identify these in Form B: Bid Solution Description and Prices – Detailed Schedule : 4.2 Middleware prerequisite software If the Bidder is authorized to supply these middleware components and is bidding their supply, the Bid Price thereof shall be included in Form B: Bid Solution Description and Prices – Detailed Schedule : 4.2. If the City acquires these items independently, the cost of acquiring these items will be added to the Total Bid Evaluation Cost.
- E2.3 VoiceXML Platform Bid Solution Components
- E2.3.1 Public Switched Telephone Network (PSTN) Infrastructure
- (a) Winnipeg Transit’s current IVR telephone infrastructure is supplied by MTS Allstream Inc., a wholly owned subsidiary of Manitoba Telecom Services Inc. Currently 63 analog trunks are utilised for IVR system access. Fifty one (51) trunks are dedicated to the TeleBus application. These 51 trunks are not part of the City’s Nortel Centrex PBX. The TeleBus trunks are accessed through a single telephone number (287-7733). There is no automated call distribution associated with these trunks. Transit has twelve (12) analog trunks currently allocated to the “Confirm” Handi-Transit IVR application. These 12 trunks are accessed through a single external telephone number 986-5711 which is part of the City’s Centrex PBX. The 12 “Confirm” trunks are allocated via an Automated Call Distribution (ACD) mechanism.
  - (b) Winnipeg Transit recognises that due to probable longer call duration times; additional telephone infrastructure capacity may be required for the new IVR applications. Bidders shall therefore propose Bid solutions that have a capacity of one hundred (100) trunks and support one hundred (100) concurrent sessions. Bidders shall not include the direct cost of expanding the telephone infrastructure in the Bid Solution. However, all quantitative requirements related to the number of telephone lines/trunks, such as the number of interfaces or number of licences, shall be based on a quantity of one hundred (100).
  - (c) Winnipeg Transit will consider Bid Solutions that require a conversion of the telephone infrastructure to digital technology. Bidders may propose a Bid Solution that includes said conversion of the telephone infrastructure. Bidders are advised that Manitoba Telecom Services Inc. (MTS) is currently the sole source supplier of the telephone infrastructure.

- (i) If the Bidder chooses not to sub-contract these services, the Bidder shall include the detailed specification of the required upgrade in Form B: Bid Solution Description and Prices – Detailed Schedule : 5.2. Any cost incurred by Winnipeg Transit to upgrade the telephone infrastructure independently with MTS as specified by the Bidder will be added to the Total Bid Evaluation Cost.
- (ii) The Bidder shall propose a solution that enables Winnipeg Transit to share the incoming telephone lines for multiple applications while retaining the existing telephone numbers that the public is used to. To facilitate this, the solutions proposed by the Bidder shall provide called number identification routing or alternate methods of accessing the associated application that do not require specific selection by the customer. The Bidder shall detail the specifications as to how the IVR telephone infrastructure is to be combined in Form B: Bid Solution Description and Prices – Detailed Schedule .

Although Winnipeg Transit will consider Bid Solutions that do not enable line sharing, the City will add the cost of adding additional capacity to match that of the shared lines to the Total Bid Evaluation Cost.

- (iii) Bidders shall also take into account that the current publicly known “TeleBus” and “Confirm” telephone numbers need to be retained. These numbers are familiar to a large community of Transit users. Changing these numbers would entail a very large communication campaign and require the modification of a large amount of existing service data communication media.

Although Transit will consider Bid Solutions that do not retain the existing telephone numbers, the City will add the total cost of changing the telephone numbers and communicating this to the public to the Total Bid Evaluation Cost. This includes changing the number on approximately 4,500 bus stop plates, 535 vehicle interior/exterior decals, and republishing of all information media that references the numbers.

#### E2.3.2 PSTN Telephone Interface

- (a) Winnipeg Transit does not have access to a commercial grade Voice over Internet Protocol (VoIP) service provider. An interface is therefore required to connect the PSTN Telephone Infrastructure referenced in E2.3.1 with the VoiceXML Platform that is the subject of this Bid Opportunity.
- (b) Further to the response to E2.3.1 the Bidders shall include the definition of the interface to the PSTN in their Bid Solution. This interface may be built into a solution that is “appliance” based, or may be an external component in a modular Bid Solution.
- (c) If the Bid Solution requires analog or voice Telephony Voice Boards, the Bidder shall specify these in response to Form B: Bid Solution Description and Prices – Detailed Schedule : 6 - PSTN Telephone Interface Hardware Requirement.

If the Bidder is an authorized reseller of the Voice Boards specified, the Bidder may include a Bid for supply of the Voice Boards in Form B: Bid Solution Description and Prices – Detailed Schedule : 6.3.

If the Bidder does not include a Bid for said Voice Boards, the City will add the cost of acquiring these items independently to the Total Bid Evaluation Cost.

- (d) If the Bid Solution requires a digital or analog VoIP Gateway, the Bidder shall specify this in response to Form B: Bid Solution Description and Prices – Detailed Schedule : 6 - PSTN Telephone Interface Hardware Requirement.

If the Bidder is an authorized reseller of the VoIP Gateway specified, the Bidder may include a Bid for supply of the VoIP Gateway in Form B: Bid Solution Description and Prices – Detailed Schedule : 6.3.

If the Bidder does not include a Bid for said VoIP Gateway, the City will add the cost of acquiring this item independently to the Total Bid Evaluation Cost.

### E2.3.3 VoiceXML Interpreter

- (a) Bidders shall provide a Bid Solution that as a mandatory core component includes VoiceXML Browser/Media Server software certified capable of interpreting VoiceXML 2.0. Bidders shall provide documentation indicating successful certification of the proposed Platform by the VoiceXML Forum of the IEEE Industry Standards and Technology Organization (IEEE-ISTO).
- (b) All Bidders will provide a detailed description of the VoiceXML Interpreter proposed in the Bid Solution Form B: Bid Solution Description and Prices – Detailed Schedule : 12 - VoiceXML Interpreter Platform Specifications
- (c) Bidders shall identify whether the proposed VoiceXML Interpreter supports any VoiceXML 2.1 extensions.
- (d) Bidders shall identify any proprietary extensions that Winnipeg Transit would be required to utilise in order to implement the required application on the platform defined by the Bid Solution.
- (e) Any additional features of the VoiceXML Platform that are significant to the evaluation of the Bid Solution shall be described in Form B: Bid Solution Description and Prices.
- (f) Bidders shall provide Bid Prices for the VoiceXML Interpreter in Form B: Bid Solution Description and Prices – Detailed Schedule : 14 - VoiceXML Platform Cost. Bidders proposing a Turn-Key Hardware/Software VoiceXML “Appliance” shall enter the Total Bid Price in this section.

### E2.3.4 Speech Synthesis (TTS)

- (a) The Bidder shall propose a solution that enables high quality Speech Synthesis (TTS) with the following attributes:
  - (i) provision of a minimum 22 kHz quality speech output. Evaluation criteria are structured to give preference to solutions providing the highest quality speech;
  - (ii) provision, at a minimum, of both English and French language support. Both an American/Canadian English and a Canadian French voice/dialect shall be available;
  - (iii) support for at least one standard phonetic alphabet that can be applied uniformly across its available languages/voices; this will enable voices to be replaced as required with minimal impact to the applications;
  - (iv) provision of a custom dictionary;
  - (v) compliance with SSML;
  - (vi) support for in-line phonemes;
  - (vii) adherence to UNIPA, L&H, PLS or SAPI5;
  - (viii) ability to optionally create sound file (.wav) output;
  - (ix) ability to change the following attributes such as voice, language, rate, volume, emphasis, and delays/silence in a single dialogue.
- (b) Text-to-Speech functionality shall be based on:
  - (i) an integrated native Text to Speech Module; or
  - (ii) an external pull-in Text to Speech Module; or
  - (iii) an external facility conforming to the Internet Engineering Task Force - Media Resource Control Protocol (MRCP) .
- (c) The Bidder shall provide the detailed specifications of the proposed Text-to-Speech solution by completing Form B: Bid Solution Description and Prices – Detailed Schedule : 10.

- (d) Bidders proposing a solution which includes a native built in TTS function, where the cost of this component is not included in the overall platform cost, shall indicate the Bid Price for the TTS component in Form B: Bid Solution Description and Prices – Detailed Schedule 10.2(b) for items that are language independent and Form B: Bid Solution Description and Prices – Detailed Schedule : 10.2(c) for language specific components.
- (e) Bidders proposing an external TTS component will include a detailed specification of the components in Form B: Bid Solution Description and Prices – Detailed Schedule 10.3. If the Bidder is an authorised reseller of the TTS product and the Bidder offers to supply the product, the Bid Price for the language independent items shall be included in Form B: Bid Solution Description and Prices – Detailed Schedule 10.3(b) and the Bid Prices for any language dependent items in Form B: Bid Solution Description and Prices – Detailed Schedule 10.3(c).

If the Bidder does not include a Bid for said external TTS components, the City will add the cost of acquiring this item independently to the Total Bid Evaluation Cost.

#### E2.3.5 Speech Recognition

- (a) The Bidder shall propose a solution that provides high quality Automated Speech Recognition (ASR) and meets the following minimum requirements:
  - (i) Both English and French language support;
  - (ii) The ASR solution must allow tuning of the recognition confidence threshold level, as well as other operating characteristics such as speed-versus-accuracy weighting;
  - (iii) Support for grammar standards (ABNF, SRGS-XML, etc);
  - (iv) Custom dictionary and language support;
  - (v) Ability to capture utterances and associate these with a call for subsequent analysis;
  - (vi) Ability to recognise multiple languages in one dialogue.
- (b) Automated Speech Recognition functionality shall be based on:
  - (i) An integrated Automated Speech Recognition; or
  - (ii) A plug-in Automated Speech Recognition; or
  - (iii) An external facility conforming to the Internet Engineering Task Force - Media Resource Control Protocol and capable of supporting a high quality Automated Speech Recognition component. (e.g. Nuance OpenSpeech™ Recognizer).
- (c) The Bidder shall provide the detailed specifications of the proposed ASR solution by completing Form B: Bid Solution Description and Prices – Detailed Schedule : 11.
- (d) Bidders proposing a solution which includes a native built in ASR function, where the cost of this component is not included in the overall platform cost, shall indicate the Bid Price for the ASR component in Form B: Bid Solution Description and Prices – Detailed Schedule 11.2(b) for items that are language independent and Form B: Bid Solution Description and Prices – Detailed Schedule : 11.2(c) for language specific components.
- (e) Bidders proposing an external ASR component will include a detailed specification of the components in Form B: Bid Solution Description and Prices – Detailed Schedule 10.3. If the Bidder is an authorised reseller of the ASR product and the Bidder offers to supply the product, the Bid Price for the language independent items shall be included in Form B: Bid Solution Description and Prices – Detailed Schedule 11.3(b)11.3(c) and the Bid Prices for any language dependent items in Form B: Bid Solution Description and Prices – Detailed Schedule 11.3(c).

If the Bidder does not include a Bid for said external ASR components, the City will add the cost of acquiring this item independently to the Total Bid Evaluation Cost.

## E2.4 Performance

- (a) The Bidder shall propose a VoiceXML Platform that meets the following performance criteria:
  - (i) The Platform shall be capable of handling a minimum of 100 concurrent incoming self-service customer calls while simultaneously utilising both the ASR and TTS features;
  - (ii) The Platform shall be capable of processing a minimum of fifty thousand (50,000) calls in a twelve (12) hour period.
- (b) The Bidder will describe the performance capabilities of the Bid Solution and indicate conformance to these performance requirements in Form B: Bid Solution Description and Prices – Detailed Schedule : 15 Performance. Bidders shall base performance on an average call duration of 150 seconds. Bidders shall assume that a 10% ASR to 90% TTS duration ratio for 80% of calls. A duration ratio of 40% ASR to 60% TTS should be used for the remaining 20% of calls. A sample dialogue for the TeleBus IVR application is included as Diagram E3.2.

## E2.5 Availability

E2.5.1 The IVR applications that will utilise the VoiceXML Platform are critical to the customers of Winnipeg Transit. The Bidder shall provide a Platform that provides a high level of availability. The Platform proposed in the Bid Solution shall be architected such that an availability of at least 50% of the capacity is available 99.95% annually.

- (a) The Bidder shall provide a Bid Solution that provides a redundancy in the hardware/software components such that support for a minimum of 50% capacity for incoming calls can be maintained.
- (b) Among other possible methods of providing availability, Winnipeg Transit assumes Bidders may opt for either of the following:
  - (i) Provision of a “Redundant Hot Spare System” in which the majority of components of the VoiceXML Platform are redundantly duplicated. It is assumed that in the circumstances of a failure, the “spare system” would assume the role of the primary production system;
  - (ii) Provision of “Parallel Production Systems” where two virtually identical systems would share the processing load of the overall application demand. Each system would be sized smaller than a single production platform in E2.5.1(b)(i). Both systems would be active at all times. In the case of a failure of one system, it is assumed that the other would assume the entire workload.
- (c) Winnipeg Transit prefers a solution which provides redundancy through “Parallel Production Systems” as opposed to an available “Redundant Hot Spare System” which is unproductive for the vast majority of time. Winnipeg Transit will consider any contingency solution if it provides an overall operational and economic advantage and meets the stated availability criteria.

E2.5.2 The Bidder will describe the proposed availability features included in the Bid Solution and indicate conformance to this requirement in Form B: Bid Solution Description and Prices – Detailed Schedule : 16 Availability.

## E2.6 Platform Evaluation

- E2.6.1 Prior to awarding the Purchase Order, Winnipeg Transit will test the platform described in the Bid Solution using a prototype of the TeleBus schedules IVR application. This test will encompass; VoiceXML, TTS, ASR, Call Management functionality and compatibility.
- (a) All Bidders shall provide Winnipeg Transit with the opportunity to undertake a full end-to-end test of the Platform proposed as the Bid Solution.
  - (b) Where applicable and possible, Bidders should provide Winnipeg Transit with the means to audition the Bidder’s proposed voice personalities.

- (c) Bidders shall describe the method by which this Evaluation will be provided in Form B: Bid Solution Description and Prices – Detailed Schedule : 17.1(a).

#### E2.6.2 Platform Analysis

- (a) Overall Platform:
  - (i) Relative overall quality of the Bid Solution as indicated by the experience of interacting with the VoiceXML Platform ;
  - (ii) Overall Platform performance as measured by speed, robustness and stability;
  - (iii) Quality of component/interface interaction;
  - (iv) Ease of installation and configuration;
  - (v) Flexibility from an architectural and deployment perspective.
- (b) VoiceXML Interpreter:
  - (i) Consistency;
  - (ii) Requirement for customisation;
  - (iii) Actual adherence to VoiceXML standards;
  - (iv) VoiceXML Performance as measured by speed, robustness and stability;
  - (v) Resource requirements (memory, CPU, disk activity).
- (c) Speech Synthesis Criteria that will be analysed as part of this evaluations are:
  - (i) Quality of speech output (Flow, enunciation, applicability to application, relative “natural” human equivalent sound);
  - (ii) “Out-of-the-box” pronunciation;
  - (iii) Consistency;
  - (iv) Quality of phonetic translation i.e.: requirements for phonetic mark-up;
  - (v) TTS Performance as measured by speed, robustness and stability;
  - (vi) Language processing accuracy.
- (d) Voice Recognition Criteria that will be analysed as part of this evaluations are:
  - (i) Accuracy of recognition related to both simple numeric input as well as complex scenarios which include timers, dates, street and place names;
  - (ii) Sensitivity to specific voice types;
  - (iii) Consistency;
  - (iv) Complexity of grammar requirements;
  - (v) Barge-in performance;
  - (vi) ASR Performance;
  - (vii) Language processing accuracy.

#### E2.7 Other VoiceXML Platform Related Tools

- (a) Call Analysis Tool Set consisting of:
  - (i) The provision of information on the frequency with which specific applications and features are being used;
  - (ii) Capture and highlighting of caller behaviour, one response at a time, to provide overall statistics to uncover trends across multiple calls;
  - (iii) The provision of useful metrics to help gauge the overall user experience offered by specific applications;
  - (iv) The ability to log caller utterances and their corresponding ASR confidence levels for analysis/troubleshooting.

#### E2.8 Professional Services

##### E2.8.1 Training

- (a) Bidders shall provide a detailed description of the training services related to the proposed Bid Solution that can be provided by completing Form B: Bid Solution Description and Prices – Detailed Schedule : 18.1(a).
- (b) Bidders shall indicate their recommended level of training by identifying the appropriate training items and proposed quantities in Form B: Bid Solution Description and Prices – Detailed Schedule : 18.1(b).
- (c) Bidders shall differentiate any training items included in the platform Bid Price versus those offered at additional cost. Bidders shall provide a Bid Price for the recommended Training services that are not included in the platform cost by completing the appropriate entries in Form B: Bid Solution Description and Prices – Detailed Schedule : 18.1(b) and 18.1(c).
- (d) The City will calculate the allocated cost of the Training Services projected to be consumed in implementing the Bid Solution based on the Bid Training Services Prices and add these to the Total Bid Evaluation Cost.

#### E2.8.2 Design and Development Service

- (a) Bidders shall provide a detail description of the Design and Development Services related to the proposed Bid Solution that can be provided by completing Form B: Bid Solution Description and Prices – Detailed Schedule : 19.1(a)
- (b) Bidders shall differentiate any Design and Development Service items included in the platform Bid Price versus those offered at additional cost. Bidders shall provide a Bid Price for the Design and Development Services that are not included in the platform cost by completing the appropriate entries in Form B: Bid Solution Description and Prices – Detailed Schedule : 19.1(c).
- (c) The City will calculate the allocated cost of the Design and Development Services projected to be required for implementation of Winnipeg Transit's applications on the platform proposed in the Bid Solution based on the Bid Design and Development Services Prices and add these to the Total Bid Evaluation Cost.

#### E2.8.3 Installation and Implementation Services

- (a) Bidders shall provide a detail description of the Installation and Implementation Services related to the proposed Bid Solution that can be provided by completing Form B: Bid Solution Description and Prices – Detailed Schedule : 20.1(a).
- (b) Bidders shall indicate their recommended level of Installation and Implementation Services by identifying the appropriate items and proposed quantities in Form B: Bid Solution Description and Prices – Detailed Schedule : 20.1(b).
- (c) Bidders shall differentiate any Installation and Implementation Services items included in the platform Bid Price versus those offered at additional cost. Bidders shall provide a Bid Price for the recommended Installation and Implementation Services that are not included in the platform cost by completing the appropriate entries in Form B: Bid Solution Description and Prices – Detailed Schedule : 20.1(b) and 20.1(c).
- (d) The City will calculate the allocated cost of the Installation and Implementation Services projected to be consumed in implementing the Bid Solution based on the Bid Installation and Implementation Services and add these to the Total Bid Evaluation Cost.

#### E2.8.4 Advanced Speech Application Consulting Services

- (a) Bidders shall provide a detailed description of the Advanced Speech Application Consulting Services related to the proposed Bid Solution that can be provided by completing Form B: Bid Solution Description and Prices – Detailed Schedule : 22.1.
- (b) Bidders shall differentiate any Advanced Speech Application Consulting Service items included in the platform Bid Price versus those offered at additional cost. Bidders shall provide a Bid Price for the Advanced Speech Application Consulting Services that are not included in the platform cost by completing the appropriate entries in Form B: Bid Solution Description and Prices – Detailed Schedule : 22.2.

- (c) The City will calculate the allocated cost of the Advanced Speech Application Consulting Services projected to be required for implementation of Winnipeg Transit's application on the platform proposed in the Bid Solution based on the Bid Advanced Speech Application Consulting Services and add these to the Total Bid Evaluation Cost.

#### E2.9 Other Items of Work

- (a) The City has attempted to specifically identify all items of work required for deployment of a VoiceXML Platform in this Bid Opportunity.
- (b) If other items of work, including both Goods and Services, not noted in Form B: Bid Solution Description and Prices, are required to implement the Bidder's Bid Solution, Bidder's shall:
  - (i) provide a detailed description of the item of work including quantity, unit of measure, and;
  - (ii) unit cost information in Form B: Bid Solution Description and Prices 22.1.

#### E2.10 Manuals and Documentation

- (a) The Contractor shall provide a complete set of manuals and documentation for all components proposed in the Bid Solution. This includes software, hardware and middleware detail items as well as documentation for the overall solution. This shall include, but is not limited to:
  - (i) Installation and configuration guides;
  - (ii) User manuals;
  - (iii) Technical and System Manuals.
- (b) Manuals and documentation may be provided in hard copy or electronic format.

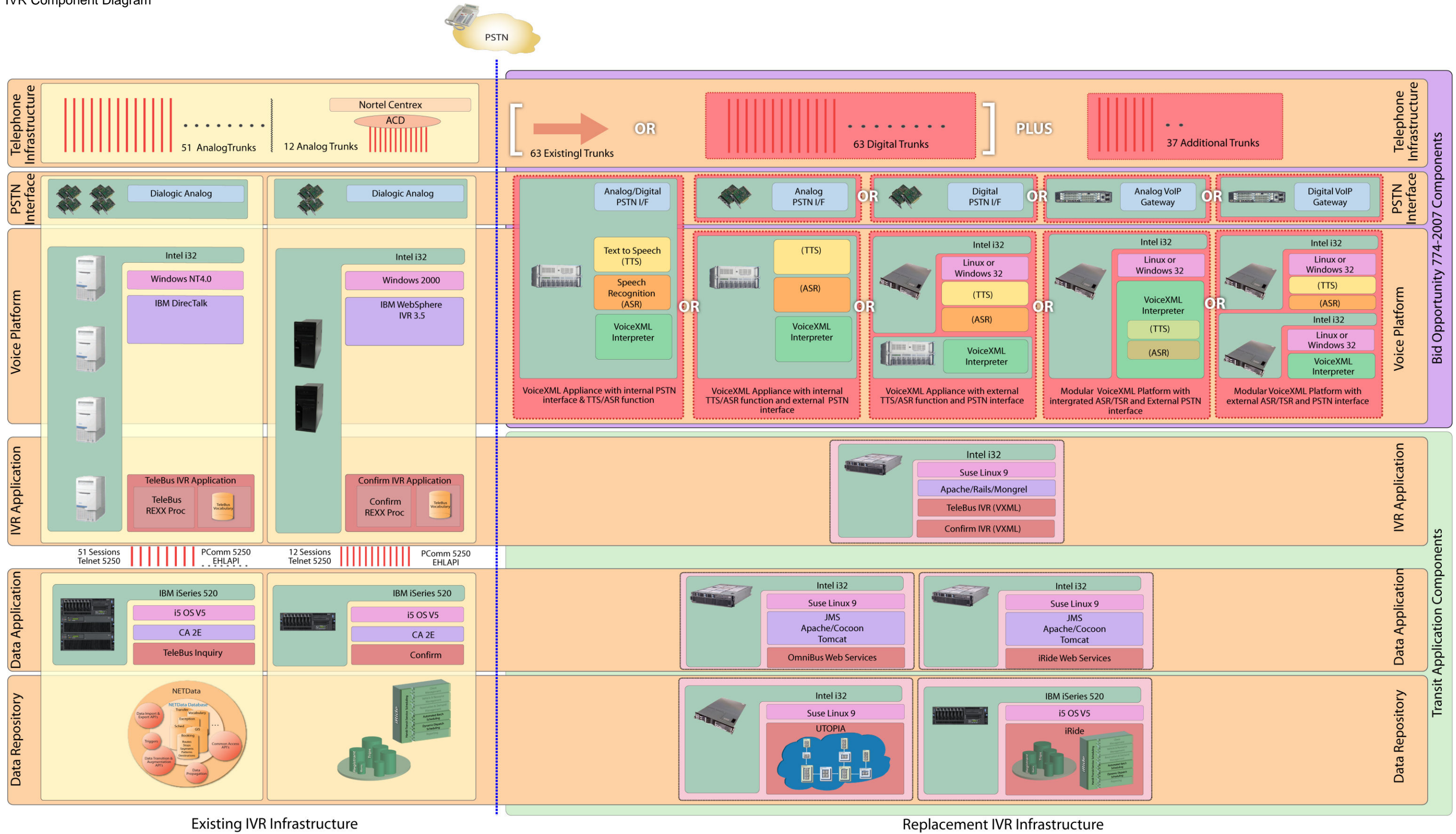
#### E2.11 Maintenance Agreements

- (a) Bidders shall provide all details applicable to maintenance agreements for each component proposed in the Bid Solution.
  - (i) Software maintenance agreements for applications and middleware, and
  - (ii) Hardware maintenance agreements for any hardware components, and
  - (iii) overall platform maintenance agreement if applicable.
- (b) Sample maintenance agreements/plans shall be itemised in Form O: Schedule of Maintenance Agreements and a copy of each attached to this Form.



**E3. DIAGRAMS**

**E3.1 IVR Component Diagram**



Existing IVR Infrastructure

Replacement IVR Infrastructure

### E3.2 Prototype "TeleBus" Application Dialogue Flow

