Request for Proposals
2013 Test Tool Development for Connectathon, Spring 2014
Treatment Delivery Workflow II Profile

October 31, 2013
Please respond to:
Amber Sims, MPH
Program Manager of Research and Evaluation
American Society for Radiation Oncology (ASTRO)
ambers@astro.org
I. PURPOSE

A. The American Society for Radiation Oncology (ASTRO) is soliciting two (2) proposals for the development of software test tools in support of IHE Radiation Oncology (IHE-RO) 2010-2013 Integration Profiles. This RFP covers the test tools for the Treatment Delivery Workflow II Profile. The test tools are expected to be ready for use by January 31, 2014, for the IHE-RO Connectathon scheduled to take place April 28-May 3, 2014.

The second RFP will cover Quality Assurance with Plan Veto. Vendors submitting bids in response to this RFP may choose to bid on one or both of these RFPs. Those bidding on both RFPs may submit a joint proposal accounting for both test tools and noting any discounts for awarding of multiple projects.

B. Application Deadline. Proposals must be submitted by 12:00 p.m. ET, October 31, 2013.

C. Contact Person. Amber Sims, Program Manager of Research and Evaluation, ambers@astro.org, 703.839.7370.

D. Confidentiality of Proposals. Submissions will be shared with ASTRO staff and member leadership for review and discussion. ASTRO will review responses to the RFP and conduct appropriate follow-up as necessary to narrow the field to a select group of finalists for the project. Follow-up may include contacting references (as identified to show relevant experience) and discussions with the vendor.

II. ABOUT ASTRO

A. ASTRO is the largest radiation oncology society in the world, with 10,000 members who specialize in treating patients with radiation therapies. Of these members, approximately 5,000 are physicians practicing radiation oncology in the United States. As the leading organization in radiation oncology, biology and physics, the Society is dedicated to the advancement of the practice of radiation oncology by promoting excellence in patient care, providing opportunities for educational and professional development, promoting research and disseminating research results and representing radiation oncology in a rapidly evolving healthcare environment. More information about ASTRO is available at www.astro.org.

III. ABOUT IHE-RO

A. IHE-RO is one of the nine domains under the IHE umbrella. The initiative is comprised of clinicians and vendor representatives who collaborate to create use cases, or clinical scenarios, for information sharing. The use cases are challenging connectivity issues that are solicited from within the community. These use cases then become developed into profiles, which are detailed specifications of the exact process for how communication can occur seamlessly.

Test tools are written and distributed to participating vendors to assist in application development by providing a limited set of testing scenarios. Before the profile is voted to final text, it is tested by vendors during 'Trial Implementation’ phase at a testing event.
that is hosted by ASTRO called a Connectathon. This is a week-long event held at ASTRO Headquarters in Fairfax, Va., and allows vendors the opportunity to determine compatibility with each other. There are judges present, typically physicists, to help facilitate the process and determine if compatibility was achieved. Vendors must demonstrate that they are able to successfully pass information to at least 3 vendors and receive information from at least three vendors (because of the nature of the field, in some cases there are only two vendors available). The results of passed testing are published. The profiles are then implemented by vendors into their products and required by IHE to be released within one year of testing at a Connectathon.

Prior to the Connectathon, vendors have the ability to do informal testing at what is called the Domain Pre-testing event. This pre-testing event of the profiles typically occurs 6 months before the Connectathon.

IV. BACKGROUND: TREATMENT DELIVERY WORKFLOW II

A. The effort described in this RFP involves the development of Test Tools in support of the 2013 Profile Treatment Delivery Workflow II, as defined in the IHE Radiation Oncology Treatment Delivery Workflow II supplement. The current version is labeled ready for review, but because of the nature of this profile, IHE-RO feels that the chance for large changes in the technical description is unlikely. The supplement is available at http://www.ihe-ro.org/doku.php?id=doc:profiles.

The Treatment Delivery Workflow II profile is a correction on the original Treatment Delivery Workflow profile. The Treatment Delivery Workflow profile was based and implemented on frozen supplements to the DICOM standard. When those supplements were accepted to the standard, some specific changes were made to the transactions that were different from the original specifications. Treatment Delivery Workflow II had to be created to document adherence to the way the transactions are described in the standard currently.

V. PROJECT SPECS/TECHNICAL REQUIREMENTS

A. DESCRIPTION: The Treatment Delivery Workflow II profile defines the relevant standards and constraints on those standards needed to implement interoperable transfer of patient workitem and dose information between a Treatment Management System and a Treatment Delivery Device. The transactions in the profile are listed in the table below and defined in the supplement.

Test tools for this project shall be capable of determining that all input and output objects are created and exchanged, and that the actors can properly receive and create such objects. Unified Procedure Step, RT Plan, RT Delivery Instruction and RT Beams Treatment Record shall be available to sufficiently test the operation of the actors.

- Vendors building the existing DVTk test tools implemented in the IHE-RO 2007, 2008 and 2009 test tools contract (which can be found at www.DVTk.org) will be given preference over equal proposals which utilize different foundations.
- Vendors are encouraged to support both 32-bit and 64-bit versions of Windows XP and Windows 7 and 8 operating systems.
- Vendors shall indicate which OS and hardware types are supported in their responses.

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<thead>
<tr>
<th>Actors</th>
<th>Transactions</th>
<th>Optionality</th>
<th>Reference</th>
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<tbody>
<tr>
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<td>RO-58 Worklist Query for Treatment Delivery</td>
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<td></td>
<td>RO-60 Treatment Delivery in Progress</td>
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<td>RO-61 Retrieve Dynamic Treatment Delivery Input Instances from TMS</td>
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<td>RO-62 Treatment Delivery Progress Update</td>
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<td>RO-63 Store Treatment Delivery Results to TMS</td>
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<td>RO-64 Treatment Delivery Final Update</td>
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<td>RO-63 Store Treatment Delivery Results to OST</td>
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<td>RO TF-2: 3.63</td>
</tr>
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VI. PROPOSAL FORMAT

A. **Title Page.** Title page should include:
   1. Vendor Name
   2. Vendor Address
   3. Vendor Website
   4. Primary Contact
   5. Primary Contact Title
   6. Primary Contact Phone
   7. Primary Contact Fax
   8. Primary Contact Email address

B. **Cover Letter.** Cover letter should include:
   1. Brief description of organization, history and capabilities.
   2. Signature of the individual authorized to conduct business on behalf of the company.

C. **Project timeline.** Please provide detailed timeline from implementation to completion
D. **Budget and Fees.** Please provide a detailed compensation proposal for test tools development and any other costs.

E. **Attachments.** You may provide additional information or material if applicable to the proposal.

F. **Other considerations**
   1. **Proposal length:** The proposal should not exceed 10 pages.
   2. **Font:** Please use fonts no smaller than 11 pt.

**NOTE:** Vendors shall not commence any billable work until both the vendor and ASTRO have signed a contract.

VII. **SUBMISSION DETAILS**
   A. Please submit all proposals by 12:00 p.m. ET via email to:

   Amber Sims, MPH  
   Program Manager of Research and Evaluation  
   American Society for Radiation Oncology  
   ambers@astro.org

   B. Responses should detail support for manufacturers during the testing period.

   C. ASTRO will provide support to the vendor selected in producing the test data necessary to complete the test tools. These contacts will also assist in answering questions and/or clarifying issues for the vendor. Questions regarding the RFP should be directed to Ms. Sims at the address above or to the contacts below.

VIII. **OTHER CONTACTS**
   A. Bruce Curran: bhcurran@gmail.com
   B. Chris Pauer: cpauer@accuray.com