

DEPARTMENT OF VETERANS AFFAIRS
Justification and Approval
For
Other Than Full and Open Competition

1. Contracting Activity: Sam Gordon, Biomedical Engineer; Department of Veterans Affairs, VISN 20, 648 3710 SW US Veterans Hospital Road Portland, OR National Center for Rehabilitative Auditory Research (NCRAR) 648-11-4-372-0506

2. Nature and/or Description of the Action Being Processed:

The NCRAR requires a software program that converts sliced image data (CT, MRI, fMRI) into a single 3 dimensional computer visual surface model of anatomical or hemodynamical features. Once the 3D model is assembled by the software, the software must then support the ability to change, modify, or enhance the 3D model to clearly show the desired anatomical feature, and prepare the model for 3D printing (actual fabrication of the model using light curable materials). Finally the software must output the correct .stl file format. This action is to issue a new contract for the purchase of specialized software from a sole source:

Materialise, US 44650 Helm Court Plymouth MI 48170.

The fixed and quoted price for this software, MIMICS with STL is \$13,225.00 per quotation provided.

3. Description of Supplies/Services Required to Meet the Agency's Needs:

The NCRAR requires a software program that converts sliced image data (CT, MRI, fMRI) into a single 3 dimensional computer visual surface model of anatomical or hemodynamical features. Once the 3D model is assembled by the software, the software must then support the ability to change, modify, or enhance the 3D model to clearly show the desired anatomical feature, and prepare the model for 3D printing (actual fabrication of the model using light curable materials). Finally the software must output the correct .stl file format.

More specifically MIMICS (**M**edical **I**maging **M**RI **I**mage **C**onversion **S**oftware) with STL (**S**tereo **L**ithography) software is the only to meet all the necessary requirements:

- This software shall produce accurate 3D models from CT, MRI, fMRI 2D image files.
- This software shall be able to Segment 3D physiological structure on imported images by grayscale, area, density and custom selection criteria.
- This software shall provide the ability to grow regions and perform 3D calculations of volume, surface area, and dimensions.
- This software shall support engineering directly on the 3D model
- This software shall support exporting of 3D model into STL file compatible with 3D printers.
- This software shall be able to support from 2 to 6 multicore Intel processors simultaneously.
- This software shall allow simultaneous editing of multiple slices of 2D data.
- This software shall be compatible with 64 bit Microsoft Windows.

The procurement of a software license to allow the NCRAR to use **MIMICS** and **STL** would support all currently funded C4844C Center Grant and ongoing plus future studies for a total cost of \$13,225.00. This software will ensure the NCRAR will accomplish their mission of providing critical research in areas that will support the auditory rehabilitation of United States Veterans. Specifically the NCRAR has funded studies associated with understanding and treating tinnitus and cancer treatment ototoxicity that require the use of this software. It is also anticipated that this software will be used in future studies at the NCRAR.

4. Statutory Authority Permitting Other than Full and Open Competition:

- (X) (1) ONLY One Responsible Source and No Other Supplies or Services Will Satisfy Agency Requirements per FAR 6.302-1;
() (2) Unusual and Compelling Urgency per FAR 6.302-2;
() (3) Industrial Mobilization, Engineering, Developmental or Research Capability or Expert Services per FAR 6.302-3;
() (4) International Agreement per FAR 6.302-4
() (5) Authorized or Required by Statute FAR 6.302-5;
() (6) National Security per FAR 6.302-6;
() (7) Public Interest per FAR 6.302-7;

5. Demonstration that the Contractor's Unique Qualifications or Nature of the Acquisition Requires the Use of the Authority Cited Above (applicability of authority):

Materialise US, a division of Materialise BV, a multinational corporation, is uniquely qualified to provide this software to the National Center for Rehabilitative Auditory Research based upon the following:

- a. They have the current market exclusive technologies that allow design and meshing operations directly on the anatomical data model in order to provide the required model accuracy and labor involvement associated with these highly computationally involved procedures
- b. They currently have the sole technologies to include software algorithms associated with the conversion and subsequent editing and modification of 3D models that are created using spatially sliced images created from CT and MRI scanners. These algorithms support rapid processing and the ability to modify 3D anatomical models simply and rapidly.

6. Description of Efforts Made to ensure that offers are solicited from as many potential sources as deemed practicable: Attached is the Sole Source which was posted on FBO and additionally the SEWP notice of 38 companies having chosen to "No Bid" on this opportunity.

7. Determination by the Contracting Officer that the Anticipated Cost to the Government will be Fair and Reasonable: The Contract Officer has evaluated in accordance with FAR Parts 12.209 , 13.106-3(a), 14.408-2,15.4, and 15.404-1 to ensure price fairness and reasonableness. After comparing the NCRAR requirements listed in detail under number 3 and using FAR Part 10.001 (1) , 10.001 (3)(i) and using the attached report of Intent to Sole Source posted on FBO, which returned no solicitation, it was found that that MIMICS was the only software able to meet the firm and necessary requirement of the Buyer.

8. Description of the Market Research Conducted and the Results, or a Statement of the Reasons Market Research Was Not Conducted:

The following table indicates the level of compliance with the NCRAR requirements as stated in section 3 for 3 selected companies. Only Materialise had the complete set of functionality in order to satisfy the NCRAR requirements. Materialise cost was quoted to be \$13,225.00 and Able software's price is estimated to be \$4,800.00 based upon their web pricing. There was also a comparison of two other vendors who were found in doing the research and found that neither were able to meet the requirements and in fact were not even capable of being 50% compliant with the NCRAR list of specified needs.

LOCATION		Requestor Name/Office	PROJECT NO. /	DATE	Reasons/ Specifics	Supplier	Supplier	Supplier
VISN 20 Portland, OR.		Sam Gordon	NCRAR 11-0340	August 15, 2011		Materialise MIMICS	Able Software 3D-Doctor	Image Guided Technologies
Requirements of Purchase		Rating of Importance (Scale 1-10, 10 highest)	Minimum	Maximum				
1	Accurate 3D surface models from CT, MRI, fMRI 2D image data files	10	Required Functionality	Required Functionality	Accurate 3D files are required in order to print 3D objects	Compliant	Compliant	Partially Compliant
2	Segment 3D physiological structures on imported images by grayscale, area, density, etc.	10	Required Functionality	Required Functionality	This allows individual anatomical structures to be isolated for printing	Compliant	Partially Compliant	Non Compliant
3	Ability to grow regions and perform 3D calculations	8	Required Functionality	Required Functionality	This allows direct measurements to be made on anatomical objects	Compliant	Non Compliant	Non Compliant
4	Engineer Directly on 3D model	10	Required Functionality	Required Functionality	Small anatomical features will require special supporting structures to be designed to hold them in place.	Compliant	Non Compliant	Non Compliant
5	Export 3D data into STL file for 3D printing	10	Required Functionality	Required Functionality	This allows anatomical structures to be manufactured by additive manufacturing machines (3D printers)	Compliant	Compliant	Non Compliant
6	Multicore Processor support	8	2	6	Reduce waiting time for complex modelling calculations	Compliant	Non Compliant	Non Compliant
7	Edit multiple slices simultaneously	8	4	unlimited	Ensures registration of anatomical features in each layer	Compliant	Compliant	Non Compliant
8	True 64 bit Windows operation	8	Required Functionality	Required Functionality	Reduce waiting time for complex modelling calculations	Compliant	Compliant	Non Compliant

There were eight Salient Characteristic weighted and MIMICS was at 100% compliant and the others were 56% and 6% respectively.

9. Any Other Facts Supporting the Use of Other than Full and Open Competition:

Mimics is being used worldwide by researchers and physicians in major institutions to construct actual physical models that help them see and understand complex anatomical structures non-invasively. An extensive listings of their cases is available at <http://www.materialise.com/materialise/view/en/846922-Cases.html> Additional web research has been conducted and identified a product by Able software corporation called 3D-Doctor. While this software has the capability to assemble 3D surface models from 2D slice images, it lacks 3D editing capabilities also required by the NCRAR.


10. Listing of Sources that Expressed, in Writing, an Interest in the Acquisition:

None

11. A Statement of the Actions, if any, the Agency May Take to Remove or Overcome any Barriers to Competition before Making subsequent acquisitions for the supplies or services required:

This software is state of the art research software. As time continues and if the market expands for this type of software, competition may emerge

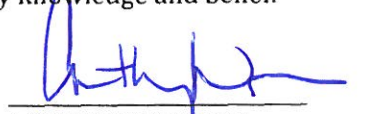
12. **Requirements Certification:** I certify that the requirement outlined in this justification is a Bona Fide Need of the Department of Veterans Affairs and that the supporting data under my cognizance, which are included in the justification, are accurate and complete to the best of my knowledge and belief.


Sam Gordon
Biomedical Engineer
NCRAR Portland Medical Center

19 Sept 2011 Date _____
3710 SW US Veterans Hospital Road
Portland, OR. 97239


13. **Approvals in accordance with FAR 6.304**

- a. **Contracting Supervisor:** I certify that the foregoing justification is accurate and complete to the best of my knowledge and belief.


ANTHONY WARNER
CONTRACTING OFFICER
SERVICE AREA OFFICE - EAST

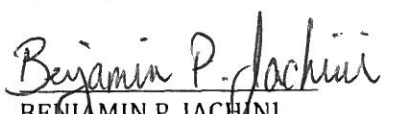
9/19/11
DATE

- b. **Contracting Officer's Certification (required):** I certify that the foregoing justification is accurate and complete to the best of my knowledge and belief.


TREVOR MARTIN
CONTRACTING SUPERVISOR
SERVICE AREA OFFICE - EAST

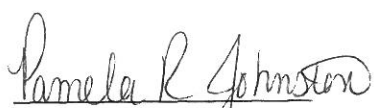
9/19/2011
DATE

- c. **SERVICE AREA OFFICE EAST QUALITY ASSURANCE (Required \$3K and above):** I certify that the foregoing justification is accurate and complete to the best of my knowledge and belief.


BENJAMIN P. IACHINI
QUALITY ASSURANCE OFFICER
SERVICE AREA OFFICE - EAST

9/21/11
DATE

- d. **NETWORK CONTRACT MANAGER (Required \$3K and above):** I certify the justification meets requirements for other than full and open competition.


PAMELA R. JOHNSTON
DEPUTY DIRECTOR
SERVICE AREA OFFICE - EAST

9/22/11
DATE

**66--3D Software****Solicitation Number: VA24011RQ0086**

Agency: Department of Veterans Affairs

Office: VA Service Area Organization East

Location: VA Service Area Organization East

Notice Type:

Special Notice

Posted Date:

September 9, 2011

Response Date:

-

Archiving Policy:

Automatic, on specified date

Archive Date:

November 8, 2011

Original Set Aside:

N/A

Set Aside:

N/A

Classification Code:

66 -- Instruments & laboratory equipment

NAICS Code:

443 -- Electronics and Appliance Stores/443120 -- Computer and Software Stores

Synopsis:

Added: Sep 09, 2011 3:49 pm

This notice serves as Intent to Award a Sole Source in accordance with FAR Part 6.

The VHA/SAO-East office, on behalf of the National Center for Rehabilitative Auditory Research (NCRAR), Portland, OR, intends to award a sole source award to Materialise, Inc. for MIMICS SOFTWARE and license. The estimated value of this action will be \$13,225. This item will be purchased under NAICS Code 443120. The small business size standard is \$25.5M.

This notice does not constitute a Request for Quote. However, you may indicate, via email to steven.danylo@va.gov if you can provide this item. Please include your contact information, DUNS Code and/or your Cage Code.

Responses are due by September 14, 2011, 6 PM EST

A J&A will be posted after contract award, estimated to be mid September.

Contracting Office Address:

US Department of Veterans Affairs; Veterans Health Administration; Service Area Organization (SAO) East; 323 North Shore Drive, Suite 500; Pittsburgh PA 15212-5319

Point of Contact(s):

Steven Danylo
Contracting Officer
412.822.3447

Contracting Officer

Opportunity History

■ **Original Synopsis**

Sep 09, 2011

3:49 pm

Requirements of Purchase VISON 20 Portland, OR.		Rating of Importance (Scale 1-10, 10 highest)	Minimum	Maximum	Reasons/ Specifics	Suppliers Comparison			
NCRAR 11-0340						MIMICS	Able Software 3D Doctor	Image Guided Technologies	
Accurate 3D surface models from CT, MRI, fMRI 2D image data files	10	Required Functionality	Required Functionality	Accurate 3D files are required in order to print 3D objects representative of physiological entities	Compliant	Compliant	Partially Compliant	Partially Compliant	
Segment 3D physiological structures on imported images by grayscale, area, density, etc.	10	Required Functionality	Required Functionality	This allows individual anatomical structures to be isolated for printing	Compliant	Partially Compliant	Non Compliant	Non Compliant	
Ability to grow regions and perform 3D calculations	8	Required Functionality	Required Functionality	This allows direct measurements to be made on anatomical objects	Compliant	Non Compliant	Non Compliant	Non Compliant	
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True 64 bit Windows operation	8	Required Functionality	Required Functionality	Reduce waiting time for complex modelling calculations	Compliant	Compliant	Compliant	Non Compliant	
Signature Requester and of Preparer:		Sam Gordon		Phone: 503-220-8262x33231	8	4.5	0.5		
DATE: 8/15/2011				Email: samuel.gordon@va.gov	100%	56%	6%		

ROUTING AND TRANSMITTAL SLIP

DATE

9/22/2011

TO: (Name, office symbol, room number, building, Agency/Post)

Initials

Date

1. Contract Officer - Review, Initial, and Forward

ASW

9/22/11

2. Supervisory CO - Review, Initial, and Forward

Kra

9/22/11

3. SAO QA - Review, Initial and Forward

BPJ

9/22/11

4. SAO Dep. Director - Review, Initial and Forward

Pg

9/22/11

5. Contract Specialist - Steven Danylo

Action	File	Note and Return
Approval	For Clearance	Per conversation
As Requested	For Correction	Prepare Reply
Circulated	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

RemarksSUBJ:**DO NOT use this form as a RECORD of approvals, concurrences, disposal, clearances, and similar actions****FROM:** (Name, Org. Symbol, Agency/Post)

Steven A. Danylo

Date

9/22/2011

SAO East - 240e

Room No. - Bldg

Phone Number

412-822-3447