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Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

SOLICITATION AMENDMENT MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du
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Issuing Office - Bureau de distribution
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11 Laurier St./ 11 rue, Laurier
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Gatineau, Québec K1A 0S5

Title - Sujet Positioning System	
Solicitation No. - N° de l'invitation 31184-132295/A	Amendment No. - N° modif. 001
Client Reference No. - N° de référence du client 31184-132295	Date 2013-11-06
GETS Reference No. - N° de référence de SEAG PW-\$\$PV-883-63768	
File No. - N° de dossier pv883.31184-132295	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2013-12-04	Time Zone Fuseau horaire Eastern Standard Time EST
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Saunders, Lynda	Buyer Id - Id de l'acheteur pv883
Telephone No. - N° de téléphone (819) 956-6851 ()	FAX No. - N° de FAX (819) 956-3814
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

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Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

Amendment 001 has been raised to modify the Request for Proposal (RFP) and publish all answers to questions received to date.

A. MODIFICATION TO THE RFP

Replace **ANNEX "A" TECHNICAL SPECIFICATIONS** in its entirety with **ANNEX "A" TECHNICAL SPECIFICATIONS (revised 6 November 2013)** attached hereto.

ALL OTHER TERMS AND CONDITIONS OF THE RFP REMAIN UNCHANGED.

B. QUESTIONS AND ANSWERS

Q1. What would be the load on each of the stacks?

A1. See "**Modification to the RFP**" above.

Q2. What would be the C of G and dimensions, and the move profile?

A2. Stack #1 load will be in the center of the rotation stage. Stack#2 load is centered but will include a probe arm of length TBD.

Q3. What do they want to inspect with the system?

A3. Silicon wafers with optical devices on them.

Q4. How do they propose to inspect the device?

A4. Each device is inspected from above using a fibre array bundle.

Q5. Are they planning to use optics?

A5. Fibre array bundles and an alignment camera will be used (neither of which is part of this tender).

Q6. What are the dimensions of each load?

A6. The dimensions of each load are yet to be determined however no significant portion of either load will be cantilevered outside of the stacks' footprint.

Q7. For Stack #1 – I need clarification on 1.1a.

- a. How is the rotation stage mounted?
- b. Would it be parallel or perpendicular to the Z stage?

A7. a. So that it rotates around the Z-axis

- b. Must be mounted so that it rotates around the Z-axis, i.e. the rotation stage is horizontal.

Q8. Where are the two stacks mounted on the mounting base with relation to each other?

A8. Stack #1 will be mounted in the center of the base. Stack #2 will be mounted on the right side of the base just out of collision range of both stacks.

Q9. What is the move profile?

- a. i.e. what time does it take to make the movements?

A9. See "Modification to the RFP" above.

ANNEX "A"
TECHNICAL SPECIFICATIONS
(revised 6 November 2013)

Positioning System

Bidders MUST ensure that they do a cross-reference compliance with each area of the specification with their own technical literature, diagrams, data, etc. in order to verify compliancy. Insufficient information to verify compliancy will result in the bidder failing to meet the mandatory criteria.

The National Research Council's Device Engineering division has a requirement for a positioning system (PS). The PS must have application as a wafer inspection system.

MANDATORY REQUIREMENTS

1.0 Positioning System (PS)

- 1.1 The PS must have two (2) motion stage stacks:
 - a) the first stack must include motion stages in X, Y and Z as well as a rotation stage which rotates around the Z axis, and
 - b) the second stack must include motion stages in X and Y (horizontal plane). The PS must have both stacks mounted on a high flatness mounting base.
- 1.2 The system must include motion controllers and power supplies for all stages.
- 1.3 Motion controllers and power supplies must be packaged in a 19" rack-mountable enclosure.
- 1.4 Labview drivers for all motion controllers must be provided.

2.0 Mounting Base Requirements:

- 2.1 The dimensions must be 650mm x 350mm (thickness not critical).
- 2.2 The surface flatness must be 10um or better.

3.0 Motion Stage Requirements:

3.1 Positioning stack #1:

3.1.1 X and Y Stages:

- a. Travel: Must be capable of 100mm of travel.
- b. Resolution: Stage resolution (step size) must be 10nm or less
- c. Accuracy: Stage must be accurate to within 500nm or less
- d. Orthogonality of X Stage with respect to Y Stage must be within 0.001 degree
- e. Operating envelope in X-Y should be no greater than 400mm x 400mm (i.e. outside edges of stack at extremes of travel)
- f. Stage must be able to travel its full range of motion in under 1 second.

3.1.2 Z Stage:

- a. Travel: Must be capable of 3-5mm of travel.
- b. Resolution: Stage resolution (step size) must be 10nm or less.
- c. 14. Accuracy: Stage must be accurate to within 1µm or less.
- d. Stage must be able to travel its full range of motion in under 1 second.

3.1.3 Rotation Stage:

- a. Travel: Must be capable of 20 degrees of rotation (+- 10 deg).
- b. Resolution: Stage resolution (step size) must be 0.0001 deg.
- c. Accuracy: Stage must be accurate to within 0.001 degree or less.
- d. Stage must be able to travel its full range of motion in under 1 second.

3.1.4 Load

- a. Positioning stack #1 must be able to carry a load of 1kg.

3.2 Positioning stack #2:**3.2.1 X and Y Stages:**

- a. Travel: Must be capable of 25mm of travel.
- b. Resolution: Stage resolution (step size) must be 5nm or less.
- c. Accuracy: Stage must be accurate to within 500nm or less
- d. Orthogonality of X Stage with respect to Y Stage must be within 0.001deg.
- e. Operating envelope of X-Y should be no greater than 160mm x 160mm
(i.e. outside edges of stack at extremes of travel)
- f. Stage must be able to travel its full range of motion in under 1 second.

3.2.2 Load

- a. Positioning stack #2 must be able to carry a load of 3kg.