Seeking: information technologists, computer scientists, web developers, software engineers or similar

1. Project Description

The Office of Research and Development (ORD) Research Program Staff has an opening for a student contractor position located in Arlington, VA (specifically, near the Crystal City METRO/subway stop, within the Washington, D.C. metropolitan area).

ORD seeks innovative individuals who have completed (or will have completed before beginning this contract) a Bachelor’s or Master’s degree (graduated with a degree from a college or university within the past 2 years) to provide services under contractual agreement in support of information technology (IT) advancement for communicating online environmental information dynamically and interactively to a variety of audiences.

EPA uses online technology to convey information to decision-makers, scientists, and the public. ORD intends to take better advantage of online technological and associated cultural advancements, such as social media, peer-production, and crowd-sourcing mechanisms, open-source software, linked open data and web services, cloud computing services, standardization and exchange of information, and graphic and geographic display and scaling of data. Successful candidates will primarily work at the intersection of online technologies and environmental problem solving.

2. Period of Performance

The period of performance is for one year from the date of award with a one year option period. Work is projected to begin on or around September 6, 2011, at 40 hours per week, with a maximum of 1928 hours, each year (excludes holidays, which will not be paid).

3. Description of Student Services:

The student contractor will interact primarily with the Principal Investigator (PI) on a new initiative to develop an extendable online platform to improve environmental problem solving and stakeholder engagement. The PI will provide assignments, guidance, and mentoring for the student.

The recent Bachelor’s or Master’s graduate shall assist ORD and its partners in their quest to foster more participatory and trans-disciplinary environmental problem formulation and problem solving by better leveraging online technologies. The following description pertains to ORD- and partner- wide efforts; however, initially the successful candidate shall support ORD’s Sustainable and Healthy Communities Research Program (SHCRP); it is anticipated that other ORD programs, partners, and potentially other organizations outside of EPA will benefit from the work of SHCRP and specifically the technological work described in this announcement.

The successful candidate shall assist ORD and its partners with the following:
- Determine online/website functional requirements and matching best available mechanisms
pertaining to a variety of potential technologies and concepts, including social media and peer-production mechanisms, open source software, cloud computing, standardization and exchange of information, and graphic and geographic display and scaling of data;

• Explore, develop, and continue to extend functionality of an extendable online platform for a variety of potential contributors and organizations to input, steward, share, and review information, complicated models of earth systems, current and future environmental conditions, advanced visualizations of information, and scenario planning exercises; users of the platform will have complex and flexible permissions and inter-relationships; graphical displays shall include both geographic/mapping tools for dynamic visualization of spatial information and non-spatial display of information using, for example, scatter plots, bar charts, conceptual diagrams or maps, organizational charts, decision trees, and flow charts;

• Stay informed of and explore new technologies within a testing/development server;

• Develop linkages to and from linked open data stores, web services, and cloud computing environments inside and outside EPA and partner servers, whereby exchanged information can be viewed within the social media platform mentioned above and displayed with advanced visual mechanisms;

• Align ORD and its partners’ on-line terminology and semantics with international informatics and standards;

• Work with ORD programs and partners to determine datasets and environmental metrics and indices appropriate for piloting and exploring the above efforts;

• Forge relationships within and outside the EPA to understand how existing projects are incorporating the above technologies and concepts;

• Work in an extended team environment, which will include EPA staff, other EPA contractors, and external partners.

• Work on other tasks required to accomplish ORD objectives, as needed and appropriate.

The student contractor will be governed by the USEPA quality system, as described in the approved QMP for the organization where the student contractor is working. Work performed by the student contractor in a laboratory setting must be in compliance with the above referenced QMP. The Mentor is responsible for ensuring this compliance.

4. Required Expertise, Skills, Education and/or Experience:

The student needs to have completed a Bachelor’s or Master’s Degree from an accredited college/university or equivalent, in a computer science, engineering, or other technical area appropriately preparing them as described by the expertise areas listed below. The applicant will have an interest in environmental science, natural resources, human health sciences, and sustainability, and an ability to quickly adopt and apply new and emerging technologies. Students who have graduated within two years are qualified to apply.

Expertise shall include one or more of the following:

• Experience with Drupal (or similar);

• Experience with online social media mechanisms;

• Programming experience in one or more of the following: C/C++, Java, Python, Javascript/AJAX.;

• Object Oriented programming skills;

• Experience with web development for creation of flexible, and interactive user-interfaces using technology such as PHP, MySQL, Flex, and API visualization tools (for example:
http://vis.stanford.edu/protovis/ex/,
http://code.google.com/apis/visualization/interactive_charts.html and
• Experience with data structures, database management and online data management, including:
  o developing linkages to web services (e.g., STORET and WQX, http://www.epa.gov/storet/tools.html) so that earth systems data – including international-, national-, and regional- scale data and meta-data – can be streamed from one online location to another and made use of at either location, and
  o allowing users of the aforementioned extendable platform to access, edit, and save information using online interfaces;
• Proficiency in online geospatial/geographic tools – for example, experience with customization of Google Earth, on-line ESRI software and geo-processing tools, Microsoft Virtual Earth, WorldWide Telescope, and integrating these technologies seamlessly into websites.

5. Required Background Investigation and Suitability Determination:

Students under this contract are required to undergo a background investigation, a check of FBI fingerprint files, and a suitability determination by the Environmental Protection Agency. Students awarded a contract will have to complete a Standard Form 85 (SF-85) “Questionnaire for Non-Sensitive Positions” and Standard Form 87 (SF-87) “Fingerprint Charts.” All completed forms will be submitted to the Contract Officer, Patrice Cunningham, cunningham.patrice@epa.gov, at least 14 business days after reporting to work. Fingerprints will either be taken at the ORD duty station (upon reporting for work) or students will be notified to have their fingerprints taken at their local police department. If a background check reveals information to indicate the student represents a risk to the interest of EPA and the national security, the contract may be terminated.

6. Work Hours:

This work is expected to begin approximately September 6, 2011 and end approximately September 6, 2012. Work hours are between the hours of 07:30 AM to 04:00 PM or 8:30AM to 5:00PM Monday thru Friday. This position is based on a maximum of forty (40) hour work week. The student contractor’s schedule will be discussed and approved by the mentor and COR. The contractor will not exceed 40 hours per week. Any additional hours above 40 hours will not be paid.

7. Compensation:

The hourly rate of compensation for this position is as follows:

Bachelor’s Degree (BA/BS) obtained: $23.06
BA/BS + 1 year of Graduate School completed: $28.15
Master’s Degree (MA/MS) obtained: $30.99

This includes the cost of self-employment taxes for social security and Medicare.

This position is for 20-40 hours per week. Student contractors will be paid the basic hourly rate only for the number of hours worked and do not receive overtime premium for any hours worked beyond the 40-hour week.

Student contractor are responsible for all costs of transportation to and from the principal duty station location. The government does not provide housing, meals, or other living expenses while working at the principal duty station. Travel away from the duty station is not anticipated. No relocation expenses will be reimbursed under this award.
8. Taxes:

The student is responsible for paying all Federal, State, or local income taxes required as a result of income received under this order.

9. Principal Duty Station:

U.S. Environmental Protection Agency
Two Potomac Yard, N-7947
2733 S. Crystal Drive
Arlington, VA 22202

The mentor for this project is Rick Ziegler (direct position-specific questions to Rick, ziegler.rick@epa.gov). The COR for this project is Gwenever Moore.

10. Evaluation Criteria:

The Government will be conducting this procurement under FAR Part 13 “Simplified Acquisition Procedures”.

The following technical factors, in order of importance will be used to evaluate the strengths and weaknesses of each student’s resume.

- Satisfactory completion of a Bachelor’s Degree and/or Master’s Degree.
- Quality of academic work as reflected by GPA, portfolio, and other measures.
- Quality and/or innovative characteristics of example work.
- Information from references about candidate’s suitability for the position (references will only be contacted if the above three factors indicate general suitability for the position)

**Student Proposals shall include**

Students’ or recent graduates’ resumes and their proposed hourly rates based on the compensation table above, will serve as the proposal for student or recent graduate services requirements. The submitted resumes should be **no more than three (3) pages** in length, exclusive of documentary evidence from USCIS, if appropriate, and contain the following information:

A) Full legal name 
B) Mailing Address 
C) E-mail address 
D) Telephone number 
E) Social Security number 
F) Date of Birth 
G) Place of Birth 
H) Statement of college or university attended with dates and GPA
I) Citizenship or immigration/visa status (if not U.S. citizen, documentary evidence from USCIS)

J) Description of recent classes relevant to the Statement of Work

K) Experience related to the subject matter (paid or volunteer work and academic)

L) Experience in the subject matter (paid or volunteer work and academic)

M) Two or more examples of work with brief explanations (for example, include a link to an online creation or application and briefly explain the project and specific contribution)

N) Three references (name, relationship to candidate, and contact information)

Please note
The Government will make contract awards based on all other factors other than price (students’/recent graduates’ knowledge and skills, academic and work experience -- training and course work as it relates to the services described in the Announcement) being significantly more important than price.

11. Instructions for the Submission of Proposals:

Interested students or recent graduates should submit their resume or statement of qualifications and rate proposal electronically to: Patrice Cunningham, Contracting Officer, Cunningham.Patrice@epa.gov. The deadline for submission is 12:00 pm Eastern Daylight Savings Time, August 1, 2011. Students or recent graduates are responsible for submitting proposals so that they reach the Government office designated by the time specified. Any proposal received at the government office designated after the exact time specified for receipt is “late” and will not be considered unless it is received before award is made, and the ORD representative determines that accepting the late offer would not unduly delay the acquisition and:

1. It was transmitted electronically and received at the initial point of entry to the Government installation and was under the Government’s control prior to the time set for receipt; or

2. There is acceptable evidence to establish it was received at the Government installation and was under the Government’s control prior to the time set for receipt; or

3. It was the only proposal received. However, a late modification of an otherwise unsuccessful proposal that makes its terms more favorable to the Government may be considered at any time it is received and may be accepted. Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the office designated by the exact time specified, and urgent Government requirements preclude amendment of the announcement, the time specified for receipt will be deemed extended to the same time of day specified on the first work day on which normal Government processes resume.

The Government will make contract awards based on all other factors other than price (students’/recent graduates’ knowledge and skills, academic and work experience -- training and course work as it relates to the services described in the Announcement) being significantly more important than price. **Personal interviews will be conducted with the most promising candidates by phone and/or in person.**

Exclusion of Sources
EPA employees, their spouses, and children are not eligible to participate in this program or to receive these contracts.

All correspondence including questions and quotes submission must have in the subject line “IT Support Services”.

**Late Quotes will not be evaluated.**

**12. Central Contractor Registration:**

The student or recent graduate contractor selected for award must register with the Central Contractor Registration (CCR) and Dun and Bradstreet (D&B) to obtain their Data Universal Number System (DUNS) Number or DUNS +4. Failure to register may adversely affect receiving an award or being paid. Student or recent graduate contractors are required to provide the following business information only once to this common Government-wide data source: their Taxpayer Identification Number (Social Security Number or Employer Identification Number), Electronic Funds Transfer (EFT) information, and DUNS number.

To obtain a DUNS number, students or recent graduate contractors can call D&B at 1-866-705-5711 or contact D&B at [http://www.dnb.com/updte](http://www.dnb.com/updte). To register for the CCR, contractors can call 1-888-227-2423 or 296-961-5757 or contact CCR at [http://www.ccr.gov](http://www.ccr.gov). There is no charge to register for DUNS or CCR.
13. Required Clauses:

The following clauses will be applicable to the resulting contract. Full text of these clauses may be found at www.arnet.gov/far or http://www.epa.gov/oamrfp12/ptod/epaar.pdf.

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