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April 7, 2002

Jeff Nelligan, Managing Director,
Public Affairs
U.S. General Accounting Office,
441 G. Street NW, Room
Washington, D.C. 20548

Re: Challenges to Effective Adoption of the Extensible Markup Language (GAO-02-327,
<http://www.gao.gov/new.items/d02327.pdf>).

Dear Mr. Nelligan,

I am writing to request that the U.S. General Accounting Office act quickly to correct inaccuracies in the above-referenced report that are damaging to the organization I represent as well as to U.S. government interests.

I am the executive director of the HR-XML Consortium. The HR-XML Consortium is an independent, non-profit organization that develops XML vocabularies to enable e-business and HR data interchange worldwide. HR-XML has more than 100 member organizations, including technology leaders, such as Cisco Systems, IBM, Northrup Grumman, Oracle, PeopleSoft, and SAP (a full list of members appears at the end of this letter). HR-XML has members located in more than 22 countries.

Although the report makes many references to the HR-XML Consortium and discusses the applicability of the Consortium's work to U.S. government entities, the author of the report did not contact HR-XML in researching information for the report.

A key finding in the report is that "potentially useful XML vocabularies are not ready for government-wide adoption." I do not necessarily dispute this finding. However, I strongly object to information the report provides to support this finding as it relates to human resources (HR) management vocabularies. I am writing to provide an accurate accounting of the HR-XML Consortium's work and its goals. I request that GAO publish this letter as an addendum to the report or otherwise publish a fair and complete accounting of the Consortium's work.

I also want to offer some advice to government stakeholders about how the development of vocabularies suitable for government adoption could be accelerated. At the risk of stating the obvious, I can assure you and representatives of any U.S. federal government organization that XML vocabularies for HR are not likely to be ready for government adoption without active involvement by government stakeholders.

The sections that follow detail the problems with the report and my recommendations for more productive federal involvement within HR-XML.

1. HR-XML's Progress Is Seriously Misrepresented

HR-XML's standards activities are member-driven. Our members set our priorities. Consider HR-XML's Staffing Industry Data Exchange Standards (SIDES) project. SIDES is a complete set of

specifications to enable the e-procurement of temporary staffing. HR-XML members Adecco, Kelly, Manpower, Randstad, Spherion, and Vedior proposed this project in August 2001. We announced the commencement of this project on Sept. 10. In spite of a challenging business climate for many of our member companies during the past several months, we will be releasing SIDES 1.0 during the first week of May 2002. The specification includes more than two-dozen component schemas and makes extensive use of the Consortium's "Cross-Process Objects" (see the explanation of Cross-Process Objects below).

SIDES is not the Consortium's only success story. The HR-XML Consortium has a growing number of them. One of the most remarkable success stories of 2001 was our Time and Expense reporting initiative ("XML Timecard"). This workgroup was formed after our July 2001 meeting. The 1.0 specification was approved at our October meeting. What is remarkable is that this project team – with representatives from Oracle, SAP, and Kronos (among others) based in the United Kingdom, Germany, and the United States – was able to deliver its first specification in less than four months without a single face-to-face meeting. Work was accomplished via weekly conference calls and vigorous on-line communication.

What else has HR-XML accomplished? The following are brief descriptions of some of HR-XML's specifications:

- **BackgroundCheck-1_0.** (Candidate Recommendation, May 2002 release target) The BackgroundCheck-1_0 specification defines schemas to support requests to third-party suppliers of background checking services as well as the return of search results. The schema for background check requests explicitly supports screenings relating to criminal records, department of motor vehicle records, education, employment history, and credit worthiness. In addition, the BackgroundCheck schema is sufficiently flexible to transmit information required to execute custom screenings that a client might arrange with a background checking service provider.
- **EntityIdentifier-1_0.** (Candidate Recommendation, May 2002 release target) This specification sets out a methodology for managing identifiers for people, organizations, transactions, or other "entities" that may need to be referred to across a series of related conversations between trading partners. The specification sets out a methodology for identifier management across HR-XML Consortium schemas. It includes a set of design norms and recommendations as well as an XML Schema data type to use for entity identifiers.
- **Resume-2_0.** (Candidate Recommendation, May 2002 release target) HR-XML's Recruiting and Staffing workgroup has developed a follow-up to the resume definition that was included in its Staffing Exchange Protocol (SEP) specification. The new resume was developed using XML Schema Definition Language, which makes it more flexible and extensible than the resume included in previous versions of SEP.
- **Competencies-1_0** (Approved) The competencies schema allows the capture of information about evidence used to substantiate a competency and ratings and weights that can be used to rank, compare, and otherwise evaluate of the sufficiency or desirability of a competency.
- **ContactInfo-1_0** (Approved) Contact Method provides XML schema designers the patterns they need to capture postal addresses, phone numbers, e-mail, and on-line and wireless messaging.
- **Dating-1_1** (Approved) This specification sets out an approach for HR-XML Schema designers to require or prohibit the Time Zone designation for date, time and dateTime values in a consistent manner.
- **Dating-1_0** (Approved) This specification sets out guidance for using effective dates throughout the Consortium's work.

- **PersonName-1_2 (Approved)** Prescribes the form of the Person Name object used in HR-XML specifications. This update provides a version in XML Schema as well as in DTD.
- **PersonName-1_1 (Approved)** PersonName Version 1.1 is an update of an earlier specification. Minor changes have been made and certain Version 1.0 components have been deprecated. Version 1.1 is backwardly compatible with Version 1.0.
- **PostalAddress-1_2 (Approved)** Prescribes the form of the PostalAddress object used in HR-XML specifications. This update provides a version in XML Schema as well as in DTD.
- **PostalAddress-1_1 (Approved)** PostalAddress Version 1.1 is an update of an earlier specification. Minor changes have been made and certain Version 1.0 components have been deprecated. Version 1.1 is backwardly compatible with Version 1.0.
- **Enrollment-1_0 (Approved)** This specification supports the transfer of benefits enrollment data among U.S.-based employers, third-party administrators, benefit suppliers/vendors, and other parties involved in the administration or provision of employee benefits.
- **Job and Position Header 1_0 (Approved)** the Job and Position Header specifications are high-level entities that may be used within a variety of HRM models and business processes. Both entities may be categorized into fragments such as Duties and Responsibilities, Work Policy, Requirements, and Work Schedule.
- **WorkSite and WorkSite Environment 1_0 (Approved)** The WorkSite and WorkSite Environment specifications contain information pertaining to the site or location of a job or position; the environment of a job or position; dress code; and safety equipment.
- **DefinedContributions-1_0 (Approved)** The PayrollBenefitContributions specification allows participant contributions information to be sent to a third party administrator. This specification is designed to support U.S. payrolls.
- **SEP-1_1 (Approved)** Staffing Exchange Protocol Version 1.1 includes explicit support for procurement of temporary and contract staff. A wide variety of changes also have been made from the previous version to improve the flexibility and completeness of the SEP DTDs and to make them easier to deploy globally. Version 1.1 is designed to be backwardly compatible. Version 1.0 documents are valid against Version 1.1 DTDs. Certain Version 1.0 features are now deprecated.
- **TimeCardConfiguration-1_0 (Approved)** The TimeCardConfiguration specification is designed for use with HR-XML's Time Expense Reporting specification. TimeCardConfiguration allows trading partners to describe the allowed values for the various elements of a time card.
- **Envelope-1_0 (Provisional)** A simple envelope that can be used to implement HR-XML Consortium specifications.

The specifications described above represent a significant amount of work that was accomplished within a relatively short period of time. ***How can the above-referenced work in any way be congruous with the statement in the report that HR-XML has “only two approved data definitions (for name and address) currently available”? (see page 42)***

The Consortium has produced at a rapid pace specifications that are useful and relevant to its members. The GAO report suggests that U.S. federal government agencies have an interest in the HR-XML Consortium moving rapidly to complete specifications across areas of importance to the government. However, I hope you can understand and appreciate how an incorrect portrayal

of the Consortium in the report could be very damaging to progress toward the more complete set of specifications that federal agencies desire. Let me reiterate my desire to that GAO publish this letter as an addendum to the report or otherwise publish a fair and complete accounting of the work of the HR-XML Consortium.

2. No Substantive Contact With OPM

Your report states that OPM officials “would like to use commercial standards such as HR-XML to implement [a] planned network, and officials contacted the HR-XML consortium to assess the applicability of the standard.” I won’t attempt to dispute that there could have been some type of communication between HR-XML and U.S. Office of Personnel Management. I do receive and respond to a great deal of e-mail. I know that we do have OPM representatives who have subscribed to our public mailing list. However, to my knowledge, there has never been a meeting (face to face or via telephone) between OPM officials and leaders of the HR-XML Consortium. There certainly has never been any substantive or sustained correspondence between OPM and HR-XML. Any suggestion that the HR-XML Consortium has ever consulted with OPM about the applicability of the Consortium’s work to OPM’s requirements or that OPM ever communicated its requirements to HR-XML is inaccurate. Other than the information provided in your report, I have no knowledge of what OPM’s requirements are. Specifications that meet OPM’s requirements are not likely to spontaneously emerge from HR-XML without any communication of what those requirements might be.

3. OPM Comments Suggest They Do Not Understand HR-XML Goals

While there has not been any direct communication of OPM’s requirements, the information in the report suggests that OPM may not completely understand the mission of the Consortium. It appears that OPM is concerned with the development of a data model to support internal requirements. Consider the statement: “Unable to wait for commercial standards to be developed, the [OPM] workgroup defined its own data structure and vocabulary.” I believe this is a comparison of “apples and oranges.” HR-XML focuses on the exchange of HR information between organizations. OPM’s data model and vocabulary seem to be designed for internal purposes and probably are not intended as a generalized mechanism for use by arms-length trading partners to integrate data across systems.

It is not the intent of HR-XML to enforce or promote a universal internal model for HR management. Consider this proposition from both the perspective of employers as well as HR software vendors. The U.S. federal government and the U.S. Department of Defense are not the only employers with distinctive cultures, institutional values, and operational challenges. Coming up with a complete (or even nearly complete) HR model that is appropriate for all employers regardless of size, industry, and operational requirements would be an extremely difficult undertaking with little chance of success. Moreover, assuming HR-XML could create a universal model that all vendors would use to structure their offerings, this would not necessarily advance the state of the art for HR software. Assuming HR-XML was successful in creating this standard and enforcing its use, the results would be to stifle innovation and remove an important way that vendors differentiate their offerings from one another.

Rather than working in a top-down fashion to develop a universal HR model, the HR-XML Consortium has limited the scope of its work to data interchange standards – i.e., the exchange of data between organizations or between the systems of different vendors. Basically, the Consortium’s methodology is to model a business process with the goal of identifying the points in the process where information is exchanged between trading partners. For each interaction point, the Consortium develops a generalized model of the data that needs to be passed to execute the business process at that point.

Within the HR-XML Consortium, the term “cross-process object” or “CPO” is used to refer to data elements that are used across a variety of HR management processes. The consistent use of CPOs simplifies data exchange with trading partners and enables the re-use of code. The big benefit for implementers of HR-XML specifications is that they will have a consistent view of data across different functional areas. They will be able to handle names, dates, addresses, and other common objects the same way, regardless of whether they are processing job postings, resumes, payroll, or benefits enrollment information, or carrying out other HR interchange data with trading partners.

The Consortium places a high-value on developing robust models for CPOs to promote interoperability between its diverse specifications and to manage against duplication of effort. The work of the Consortium’s CPO workgroup should be of interest to OPM and other organizations developing internal data models. There are likely to be advantages to learning from, and adhering to, HR-XML’s consensus models. However – make no mistake – HR-XML’s standards initiatives are not directly concerned with how organizations store, manage, structure, or view HR data internally.

4. Federal Involvement To Date and Recommendations Going Forward

What might federal agencies do to better assure the timely development of XML vocabularies for HR that are suitable for government adoption? Supporting HR-XML and participating within it would be good first steps.

HR-XML has one U.S. government organization as a member – the Defense Finance and Accounting Service. DFAS joined as a non-profit member. For DFAS, the Consortium waived the membership fee that private sector organizations are required to pay. Thus, unlike our private-sector member organizations, DFAS has not made any direct financial contribution to the Consortium nor has any other federal organization done so. DFAS’s only payments to the Consortium have been modest registration fees – e.g., \$195 – to cover their share of meeting costs.

DOD did make a significant contribution of intellectual property to the Consortium. DOD representatives gave the Consortium a copy of the Department of Defense Personnel Model. The model has served as a valuable reference. However, DFAS and DOD participation has not been consistent or sustained. We had DOD representatives scheduled to lead sessions at our Oct. 2001 meeting in London. Unfortunately, those individuals were restricted from traveling and could not attend. We have not had DFAS or DOD representation at our meetings since.

How might federal government entities participating within HR-XML best ensure progress toward the vocabularies that support government requirements? The Consortium has a diverse and increasing number of workgroups covering many functional areas of HR. First, I would urge federal participants to examine the Consortium’s existing work for areas of overlapping interest. For example, the GAO report highlights XML’s potential usefulness in streamlining the exchange of information relating to criminal records and even in sharing information that could be used to combating terrorism. HR-XML is delivering Version 1.0 of its Background Check specification in May 2002, yet we have had no U.S. federal participation or liaison. A second phase of this project will begin later this month. Will U.S. federal interests be represented on this project?

If the Consortium’s workgroups are not addressing issues of concern to the U.S. government entities, it would be very easy for a government organization that was a member of HR-XML to bring proposals before the Consortium for consideration. What are the factors for project success? I’ve outlined a few below based on the recent experience of our SIDES workgroup:

- *A clear definition of requirements.* For example, in August of 2001, SIDES sponsor companies delivered a 56-page document outlining their requirements and a series of “strawman” schemas.
- *Commitment to working within the Consortium established processes.* SIDES sponsors worked to satisfy the Consortium’s requirements for project formation. While SIDES companies already had a very strong strawman specification, they committed to working within the Consortium and to adopting the Consortium’s CPOs, methodology, and review processes.
- *Dedication of resources.* SIDES sponsors marshaled resources to fill required project roles (secretary, schema editor, CPO liaison, etc) from among the Consortium’s membership. They also independently funded a full-time project manager and full-time technical lead for the duration of the six-month project. Participating companies allowed their representatives to devote significant time to the project and funded travel to Consortium meetings.

To advance projects of importance, U.S. government entities should consider a similar level of participation within the Consortium. Government entities also should consider the skill sets required to work effectively within the Consortium. Having government software architects and data modelers represented on Consortium project teams is useful. However, in my opinion, a more critical factor is having effective leaders, project managers, and negotiators from government agencies participate – particularly those with experience working with private-sector software vendors. Again, I risk stating the obvious, but U.S. federal entities are unlikely to obtain the sets of specifications they desire out of the HR-XML Consortium, if they are unable to effectively communicate their common interests with HR-XML private-sector representatives and build a business case for cooperation.

5. Summary

By any measure, the HR-XML Consortium has moved very rapidly to deliver specifications desired by its members in key areas of data interchange. HR-XML is clearly one of the largest, best supported, and most productive standards groups of its kind. I request that GAO publish a fair and full accounting of HR-XML’s work to correct the inaccuracies within report **GAO-02-327**.

Of course, the Consortium has much work that remains to be accomplished. We would greatly welcome participation by U.S. federal government organizations. Without participation by federal entities (which describes the situation today), it is unrealistic to believe that HR-XML will produce government-ready specifications any time in the near future.

Thank you for your consideration and for your prompt attention to my request to correct the information within **GAO-02-327**.

Sincerely

Chuck Allen
Director, HR-XML Consortium, Inc.
1-919-247-6881

6. HR-XML Members

HR-XML Member organizations include:

Acord; Adecco Corporation*; ADP*; Aetna US Healthcare*; Allegis Group, Inc./Thingamajob.com*; American Background Information Services, Inc.; American Staffing Association; ARINSO International; Association of Test Publishers; Authoria*; BEA Systems, Inc.;

Best Software; BP; BrassRing, Inc.; CareerBuilder; CDI Corp/MRI*; Ceridian*; Cisco Systems; CitiStreet*; CompuCorps Mentoring; ComputerJobs.com; Crestone International*; Cross Current Corporation; Cyborg Systems, Inc.*; Defense Finance and Accounting Service; Deploy Solutions, Inc.*; Development Dimensions International; Dobbs Temporary Services, Inc.; eBenX*; Embrace Ltd*; Employease, Inc.*; Enrollcom; e-peopleserve Ltd; esohXML.org; European Community Telework Forum; EVOlve Software; ExecuTRACK Software GmbH; Fidelity Investments*; Fieldglass, Inc.; Great Plains*; Halcyon Internet plc; HayGroup; Hewitt Associates LLC*; Hewlett-Packard Co; Hire.com*; HireCheck*; HireRight, Inc.; HotJobs.com, Ltd.*; IBM*; International Association for Human Resource Information Management (IHRIM); Intuit*; IQNavigator; iXmatch Inc.; J.D. Edwards*; Job Partners Ltd; JobScout24; Kadiri, Inc.*; Kelly Services*; Kenexa, Inc.*; Korn/Ferry International*; Kronos Incorporated; MagnaWare, Inc.; Manpower, Inc.*; MBH Solutions, Inc.; Minnesota Life; Modis Professional Services, Inc.*; Monster.com; MrTed; MSX International; National Resume Writers' Association; nextSource; Northrop Grumman Corporation; Object Management Group; Online Benefits, Inc.*; Oracle*; Peopleclick*; PeopleSoft*; Personic*; ProAct Technologies, Inc.*; ProBusiness Services, Inc.; Profile Up; Prudential Financial; Randstad Holding*; Recruitsoft, Inc.; Reed Business Information; RewardsPlus; Robert Half International, Inc.*; Rompetrol Refining -- Petromidia Complex; SAP*; Schlumberger; Shell Oil Company -- Shell People Services; Siemens Business Services oHG; Society for Human Resource Management; Spherion Corporation*; Swedish National Labour Market Board; Synhrgy HR Technologies, Inc.; Tesseract Corporation*; The 401(k) Company; The Aviant Group; The People Business Network, Inc.; Towers Perrin*; Transcentive; Ultimate Software*; Unicru; Unifi Network; Vedio NV; Volt Services Group*; Watson Wyatt Worldwide*; William M. Mercer, Incorporated; Workscape, Inc.; WOWemployers Network, Inc.

* = Charter-Level Member