

Possible Collaborations in the United States for the e-Framework Board

Background

The e-Framework is a set of specifications and best practices and software—the reference models. The specifications are expected to improve interoperability of higher education data systems used to teaching and learning and research. The current e-Framework participants are the U.K.'s Joint Information Systems Committee (JISC) and Australia's Department of Education, Science, and Training (DEST). The Netherlands's SURF Foundation and New Zealand's Ministry of Education are expected to join this effort.

All of these organizations and agencies have a national responsibility or scope. Even though there is no comparable organization in the U.S., the e-Framework Board could consider partnerships with U.S. national agencies and organizations with similar responsibilities and objectives. Higher education in the U.S. is the responsibility of the states to regulate and, for the public sector, partially fund. The U.S. is a substantial market for e-Learning and e-Research. Many of the commercial software suppliers are U.S. based.

This document lists some of the organizations and agencies the e-Framework may find useful partners. These are not recommendations and the list includes some only marginally related by mission or interests. The list is provided alphabetically, there is no significance in the sequence presented.

HR-XML Consortium

“The HR-XML Consortium is an independent, non-profit organization dedicated to the development and promotion of a standard suite of XML specifications to enable e-business and the automation of human resources-related data exchanges.

“Human resources-related e-business — or any inter-company exchange of HR data — requires an agreement among participants about how the transaction or data exchange will be accomplished.

“The mission of the HR-XML Consortium is to spare employers and vendors the risk and expense of having to negotiate and agree upon data interchange mechanisms on an ad-hoc basis. By developing and publishing open data exchange standards based on Extensible Markup Language ("XML"), the Consortium provides the means for any company to transact with other companies without having to establish, engineer, and implement many separate interchange mechanisms.”

The HR-XML Consortium attempted to partner with IMS Global Learning Consortium, Inc. on the development of the competency specifications. In the view of the HR-XML participants, this partnership was not productive at the time.

HR-XML also has a resume specification. In a Spring 2003 pilot, more than 30,000 electronic resumes were received and 6,000 applicants were offered positions. Microsoft supports the resume specification and a Microsoft plug-in permits Word to be used to create the XML resume. This specification should have been used in electronic portfolio since the major HR systems process these electronic resumes. The resume specification is quite complete, including citations for authored works, presentations, and membership in professional organizations.

Director Chuck Allen is acknowledged as the most effective head of a standards organization. Typically the time from user request to distributed software by all major HR software suppliers is less than a year. The HR-XML organization is Raleigh, North Carolina based. For many years the organization had only two staff members, now four are listed.

All of the HR-XML materials, including meeting notes and presentations, are made immediately available in a convenient form on the Web.

National Center for Higher Education Management Systems (NCHEMS)

The National Center for Higher Education Management Systems (NCHEMS) is a private nonprofit (501)(c)(3) organization whose mission is to assist colleges and universities as they improve their management capability.

Through its more than thirty years of service to higher education, NCHEMS has been committed to bridging the gap between research and practice by placing the latest managerial concepts and tools in the hands of working administrators on college and university campuses. Since its founding, NCHEMS has received widespread acclaim for developing practical responses to the strategic issues facing leaders of higher education institutions and agencies. Established to meet the needs of working administrators, NCHEMS delivers research-based expertise, practical experience, information, and a range of management tools that can help institutions improve both their efficiency and their effectiveness.

NCHEMS issued its first data standards for colleges and universities in 1971; in 2004 NCHEMS released its latest CHES edition. The standards include specifications for alumni, course, facility, finance, human resources, and student. The specification is a collection of “best practices” rather than a specifications effort itself. Colleges purchase the specifications and related software for nominal cost, modify and extend it for their purposes, and then have an on-line database of data elements, their representations, and definitions. (An excellent resource for business intelligence applications).

Dennis Jones is the CEO of the Boulder, Colorado based organization. He is a principal advisor to state agencies, legislators, and governors. The data element dictionary work is done by Chicago-based Educause founder Chuck Thomas. The organization is exceptionally well respected for its work.

Office of Education Technology, U.S. Department of Education

“The U.S. Department of Education's Office of Educational Technology (OET) resides in the Office of the Secretary of Education. OET's core purpose is to maximize technology's contribution to improving education. OET develops national educational technology policy and implements that policy department-wide supporting the goals of *No Child Left Behind* and other initiatives.”

The Office of Educational Technology is currently working on a number of international projects in conjunction with other divisions at the Department of Education. Below we have highlighted some of the OET's international projects. [Friendship Through Education, Program for International Student Assessment Knowledge and Skills for Life (PISA), and Teacher's Guide to International Collaboration on the Internet].

Currently the Office does not have any responsibility for higher education. However, if the Secretary's Commission on the Future of Higher Education recommends extensive use of education technology and the national database on higher education students, the Office could have a key role as it does now for K-12. Early this year the Office issued a national plan recommending the SIF standards. Subsequently several states require and many more recommend purchasing software that complies with the SIF standards.

Timothy J. Magner is director of the Office of Educational Technology (OET). “As director, Magner will coordinate the development and implementation of the Department's educational technology policies.”

Office of Management and Budget, U.S. Executive Office of the President

“OMB's predominant mission is to assist the President in overseeing the preparation of the federal budget and to supervise its administration in Executive Branch agencies. ...

“In addition, OMB oversees and coordinates the Administration's procurement, financial management, **information**, and regulatory **policies**. In each of these areas, OMB's role is to help improve administrative management, to develop better performance measures and coordinating mechanisms, and to reduce any unnecessary burdens on the public” (emphasis added).

The Federal CIO Council reports to OMB. OMB has a series of data specifications underway: the Departments of Justice, Homeland Security, and Transportation are extending the Global Justice XML Data Model (GJXML) to a set of specifications

required by all U.S. federal departments and agencies as a federal Enterprise Data Model and the development of the National Information Exchange Model (NIEM).

“Largely based on GJXML from the U.S. Departments of Homeland Security, Justice, and Transportation (but not Education). The data specifications are being coordinated with the European Union and other countries separately. The specification does include education.”

An XML schema is available for GJXML and emerging for NIEM. The technical staff at OMB managing Federal Enterprise Architecture is overworked, but cooperative.

Postsecondary Electronic Standards Council (PESC)

“Established in 1997 and located in Washington, D.C., the Postsecondary Electronic Standards Council (PESC) is a non-profit, community-based, umbrella association of colleges and universities; professional and commercial organizations; data, software and service providers; and state and federal government agencies.

“PESC's mission is to lead the establishment and adoption of data exchange standards in education. The goals of the mission are to enable the improvement of institutional performance and foster collaboration across educational communities in order to lower costs, improve service, and attain system interoperability.”

PESC has a narrow scope: Electronic transcripts, test results, and student financial aid. PESC began with EDI (electronic data exchange) and is moving to XML-based data exchanges. All PESC specifications have been implemented in thousands of colleges and universities in the U.S. and Canada. The recent Data Transport specification is SOAP-based, but does not implement the recent WS-* specifications that provides separate security, message routing, etc.

PESC has an agreement with the U.S. Department of Education for joint development of specifications. PESC is primarily supported by the student finance industry.

Michael Sessa is Executive Director. He is one of the most successful higher education organization directors. PESC now has increasing membership and rapidly increasing implementation base. PESC is leading the implementation of SOA with the first implementations in 2001.

PESC and IMS discussed cooperation, but no agreement or joint work emerged. This may change when IMS Global Learning Consortium Inc. CEO Rob Abel meets with Sessa.

Schools Interoperability Framework Association (SIFA)

“The Schools Interoperability Framework Association’s (SIFA) vision within this context is that schools will be enabled to better utilize technology in a manner that leverages the promise and capabilities of interoperability between disparate applications. SIFA brings together the developers and vendors of school technology with the federal, state and local educators who use that technology. To define the rules for data movement between applications—efficiently, accurately and automatically—in the SIF Specification.”

Because of the federal emphasis on reporting for the “No Child Left Behind” initiative, there has been significant investment in administrative software for primary and secondary education. Because of federal recommendations that software be SIF compliant and long history of vendor cooperation, SIF has been or is being implemented in most U.S. schools districts.

A 3 May 2006 press release describes SIFA internationalization: “The Schools Interoperability Framework Association’s (SIFA) Board of Directors is proud to announce cooperation agreements with Becta in the United Kingdom, European Schoolnet in Europe and education.au limited in Australia. Collectively, SIFA and these three organizations will work together to lead the technical development of a world-class specification and certification program to enable data interoperability for education. These lead international agencies will work with SIFA in their countries to convene education stakeholders, identify their collective data needs and develop solutions for data interoperability—from the school to the government level.”

There have been some “boundary” issues. Viewing the primary purpose of a high school (secondary) transcript as college application, one office in the U.S. Department of Education funded PESC to develop the recently approved high school transcript specification. Viewing the exchange of student records for school transfer, SIFA thought the specification should have been developed by SIFA. It is not yet clear how broadly the high school transcription specification will be implemented by schools.

For a fee, SIFA tests and certifies software as SIF compliant. SIF Data is routinely exchanged for reporting—hierarchical summarization, for exchanging student records when a student transfers from one school to another, and as data feeds for district and state systems.

Dr. Larry Fruth, Executive Director of SIFA, is a tireless proponent of “practical interoperability.”

Software and Information Industry Association (SIIA)

“The Software & Information Industry Association is the principal trade association for the software and digital content industry. SIIA provides global services in government relations, business development, corporate education and intellectual property protection to the leading companies that are setting the pace for the digital age.”

“SIIA’s Education Division participates, shapes and supports the education industry by providing leadership, advocacy and critical marketing information to promote the success of education technology and content providers.”

The Education Division Board includes representatives from IBM Corporation, Interactive Educational Systems Design, Inc., Pearson Education, Apple Education, eSchoolMall, SchoolNet, Inc., Education Networks of America (ENA), Learning.com, Scholastic Education, Jenzabar, Inc., The McGraw-Hill Companies, Nelson Consulting, Siboney Learning Group, Carnegie Learning, Inc., Thomson Higher Education, AOL@SCHOOL, Edusoft, Kaplan K12 Learning Services, and Inspiration Software, Inc.

The Postsecondary Council includes: Cynthia Sanner (Thomson Higher Education), Page Gravely (Red Hat, Inc.), Farimah Schuerman (Farimah Schuerman, etc.), Mitch Weiburgh (Pilot Online Learning), Ellen Wagner (Adobe), John Tomeny (Sassafras Software Inc.), E. Edward Neelley, Jr., Ph.D (PerceptIS), Matt Doherty (Education Capital), Burck Smith (SmarThinking), and Glen McCandless (Focus Marketing).

Member companies include: C-CLIO, Academic Benchmarks, Academic Business Advisors, Academic Edge, Inc., Achieve3000, AMDG, Inc., Answers Corporation, AOL@SCHOOL, Apple Education, Arc Capital Development, ASAP Software, Atomic Dog Publishing, Atomic Learning, Autoskill International, Inc., Behrman House Inc. - eMedia Division, Bert Davis Executive Search, BLEgroup, Bonsal Capital, Boston Ventures Management, Inc., Broderbund, C. Blohm & Associates, Inc., Campus K12, Carnegie Learning, Inc., Carolina Software As A Service, Inc., Castanea Partners, Catalyst Consultants, ClassLink, Inc., Classroom Connect, Inc., Classwell Learning Group, Cognitive Concepts, Inc., College Board - SAT Readiness Program, CollinsConsults, CompassLearning, Computer Power Solutions of Illinois, Congressional Information Services, Inc dba Academic & Library Solutions, Inc., Consulting Services for Education, Contextual Connections, LLC, CTB/McGraw-Hill, SRI International - Center for Technology in Learning, Curriculum Advantage, Curriculum Associates, Inc., CyberEd, Inc., CyberSmart Education Company LLC, Cybersoft Technologies - Software Development Division, Decision Tree Media, LLC, Delmar -a division of Thomson Learning, Digital Directions International, Distance Learning, Inc., E.T.C. International, Edmark Corporation (Riverdeep, Inc.), Education Capital Group LLC, Education Networks of America (ENA), Education TURNKEY Systems, Inc., Educational Consulting Services, Educational Systemics, Inc., Edusoft, EdVision Corporation, Eiseman Levine Lehrhaupt & Kakoyiannis, P.C., eMeta Corporation, a Division of Macrovision Corporation, Encyclopaedia Britannica, Inc., eSchoolMall, Excelsior Software, Inc., ExploreLearning.com, Faronics Corporation, Ferrio Associates. FileMaker, Inc., Focus Marketing, Foley & Lardner LLP, Forlaget Systime A/S, FutureKids Inc., Ginn & Company, Glencoe/McGraw-Hill, Great Source Education Group, The Greaves Group, Harcourt Achieve, Harcourt Assessment, Inc., Harcourt Education Group, Harcourt Interactive Technology, Harcourt School Publishers, Harmonic Vision, Inc., HCI Productions OY, Headsprout, Inc., Heinemann-Raintree, Holt, Rinehart and Winston, Hotmath, Inc., Houghton Mifflin Company, Houghton

Mifflin School Division, IBM Corporation, identiMetrics, Inc., in2books, Information House Research, Inspiration Software, Inc., Interactive Educational Systems Design, Inc., Jenzabar, Inc., Kaplan K12 Learning Services, KC Management Group, Knowledge Delivery Systems, Inc., KnowledgeQuest Division, Learning Through Sports, Learning.com, Ligature Partners, Macromedia, Inc., MarketingWorks, Inc., MathSoft Engineering & Education, Inc., McDougal Littell, Inc., McGraw-Hill Companies Professional Publishing, The McGraw-Hill Companies, Inc., McGraw-Hill EDUCATION, McGraw-Hill Higher Education Group, McGraw-Hill Learning Network, McGraw-Hill Professional Development (MHPD), MetaMetrics, Inc., Montgomery College [a U.S. community college in the Washington area], Muzzy Lane Software, Inc., National Center for Science Literacy, Education and Technology, Nelson Consulting, Oracle USA, Oracle Academy, PBS – Teacherline, Pearson Assessments & Testing, Pearson Digital Learning, Pearson Educational Measurement, Pearson Knowledge Technologies, Pearson Learning Group, Pearson NCS, Pearson Prentice Hall, Pearson Professional & Supplemental, Pearson School Companies, Pearson School Technology, Pearson Scott Foresman, PerceptIS, LLC, PLATO Learning Inc., PowerSchool, Promethean Inc. (USA), Prometric, Promissor, ProQuest Information and Learning, Publishers Resource Group Inc, Quad Ventures LLC, Quality Education Data, Inc., Red Hat, Inc., RedRock Reports, Reed Educational and Professional Publishing, Reviews.com, Ripple Effects, Inc., Riverdeep, Inc., Riverside Publishing (a Houghton Mifflin Company), The Sage Team, Sanako Corporation, Sassafras Software, Scantron Corporation Testing & Assessment Division, Scholastic Education – Curriculum, School Library Journal, School to U, SchoolDude.com, SchoolNet, Inc., SchoolNet, Inc.— Human Capital Business Unit, Seaclyff Educational Solutions, Shore Communications, Inc., Siboney Learning Group, SIIA, SilverPlatter Information, Inc., Simba Information Inc., Six Red Marbles, SMARTHINKING, SmartStuff Software, Software Technology, Inc. (STI), Soliloquy Learning, Inc., Somatic Digital, LLC, South-Western Educational Publishing Company, Steck-Vaughn Publishing Corporation, Strategic News Service - Project Inkwell, Tabula Digita, Tech4Learning, Inc., TechERA (Technology for Education Reform and Accountability), TechThree Marketing & Consulting, Texas Instruments, Inc. Education & Productivity Solutions Business, Thinkronize / netTrekker, Thomson BROOKSCOLE, Thomson Corporation, Thomson Gale, Thomson Higher Ed, Thomson ISI, Thomson Learning, Thomson Peterson's, Thomson Wadsworth, Time For Kids (Time Warner), Tom Snyder Productions, Turner Learning, Inc., Tutor.com, The Van Tulleken Company, Vantage Points Language Arts, Vernier Software & Technology - Software Division, VIP Tone, Inc., Voyager Expanded Learning, WILL Interactive, Inc., Wilmer Cutler Pickering Hale and Dorr LLP, Winter Group, Wipro Technologies, Wireless Generation, The Wright Group / McGraw-Hill, and XanEdu.

SIIA is an effective lobbying association. Recently it has lobbied Congress to increase funding for education technology.

As an example of their activities, SIIA is holding a Webcast for education channel partners (companies who sell directly to education) June 28, 2006 from Washington, DC.

Dr. Karen Billings is Vice-President of the Education Division. She began her career as a K-12 and Higher Education teacher and has over 20 years of Industry experience including working for a number of publishing companies (all SIIA members). She heads the Education Program Development team and directs the division's strategic initiatives.

The Schools Interoperability Framework began as a SIIA project.

State Higher Education Executive Officers (SHEEO)

The State Higher Education Executive Officers association was created in 1954 by the executive officers of nine of the ten statewide higher education boards then in existence.

SHEEO's current members are the chief executive officers serving 26 statewide governing boards and 30 statewide coordinating boards of higher education.

SHEEO's mission objectives are to:

- * Assist its members and the states in developing and sustaining excellent systems of higher education.
- * Emphasize the importance of state planning and coordination for higher education by promoting effective strategic planning and statewide coordination and governance.
- * Speak as a national organization in public and private forums, promoting the interests of the states in effectively planning and financing higher education.
- * Promote cooperative relationships with federal agencies, colleges and universities, and higher education and other associations in the collection and exchange of data and information, development of standard definitions and practices, conduct of studies, and development of higher education in the public interest.
- * Formulate and recommend to public and private agencies and governments desirable guidelines for state and federal relationships to institutions of higher education.
- * Encourage studies and other action to advance statewide planning and coordination.
- * Express to the public, and their representatives in state and national legislatures, the collective opinions of state higher education officers to enhance the work of governing and/or coordinating statewide boards of higher education.

SHEEO represents the state agencies that coordinate higher education. Although SHEEO itself does not issue standards, the agency is interested in the implementation of standards and works closely with NCHEMS, ECS (Education Commission of the States), and the Washington-based NGA (National Governors Association).

President Paul Lingenfelter has headed the Boulder, Colorado-based organization for seven years.