

Workshop on
Open Source in Support of the NHII
Sponsored by the American Medical Informatics Association
at the Meeting on Developing an Agenda for the National Health Information
Infrastructure

Meeting Minutes

Session: Tuesday, July 1, 2003, 7 p.m. – 9:00 p.m.

Moderators: Robert Greenes, M.D., Ph.D., Harvard University
Martha Adams, M.D., Duke University
W. Edward Hammond, Ph.D., Duke University
Steve Shreeve, MedSphere

Topics of discussion:

1. Goals for Open Source
2. Matrix of Activities and Stakeholders
3. Business Models
4. Next Steps

We began with a statement of the goals for the evening workshop, specifically to start a process of identifying elements that would stimulate a robust and sustained open source process in support of the NHII. These elements should include potential activities, stakeholders, various roles, and possible business models for open source. The immediate goal for the session was to be able to determine at the conclusion the next steps in the process.

The group in attendance represented federal government, academic medical center researchers and practitioners, vendors, informatics societies, and professional societies.

Introduction

In November 2002, during its Fall Symposium, the American Medical Informatics Association (AMIA) held an invited workshop on open source. The outcome of that event was an affirmation of the desirability for AMIA to pursue a formal strategy stimulating open source activity. The Board desired to foster an inclusive process that would build on existing efforts and capitalize on established models.

Multiple Axes to Consider

Open source implies more than an electronic health record, tools, or content resources. In fact several categories should be kept in mind when thinking about opportunities for open source. Dr. Greenes introduced the discussion with a list

of axes indicating range of focus of open source. The list was intended to serve as a starting point for discussion, not meant to be totally comprehensive.

- a. Classes of objects
 - tools, content resources, vocabularies, standards, white papers,
- b. Activities
 - education, discussion forum, clearinghouse, development, validation/certification, distribution, support, policy, ...
- c. Stakeholders/organizational entities
 - government funding agencies and regulators, government healthcare, private practice providers, academic units, healthcare informatics specialty organizations, healthcare professional specialty organizations, standards development organizations, payers, advocacy consortia represented by groups such as the Leapfrog Group, Institute of Medicine, National Quality Forum, and regulatory agencies such as JCAHO or FDA, ...
- d. Domains of focus within NHII
 - health care systems, clinical trials, consumers, public health, ...
- e. Target participants/users
 - developers, IS implementers, end users, ...
- f. Technology platforms
 - handhelds, desktops, enterprise servers, ...
- g. Open source only vs. all objects related to a domain
 - i.e., open source considered as an end in itself or as part of a spectrum of inter-related private and public activities

Discussion

As we discussed these categories, several important ideas surfaced:

1. We have need for data sets of patient information which could be used for validation of software. These could be part of a larger project to provide “certification” of software. AMIA could be the catalyst.
2. Another useful activity is that of creating “models”, i.e., abstract specification of knowledge representations or processes. Teams of students could develop these, perhaps using the models as teaching cases.
3. A related activity would be that of creating formal UML-model-based use cases for applications.
4. Education for all will be important, partly to overcome the bias of “public domain” and “freeware” as an inferior product, and to differentiate that from a true interactive open source process in which a community participates in enhancing a collection of resources. We should look to examples such as the success of Apache. A repository could house links to *successful* open source projects.

5. Getting the word out should be a priority. We took interest in the AMIA electronic newsletter for regular distribution of news-bytes, for a listserv, and a web site.
6. While many open source initiatives are occurring, there is little coordination among them. Further, all face the need for management, communication and technical resources to facilitate them, advocacy, business and policy support, and other services. AMIA may be well-positioned to provide these services.

The following matrix created during the discussion reflects activities or areas of involvement by different stakeholder communities. Each checkmark means that agency or group has some kind of activity in that category. The exercise generated a great deal of discussion and really caused us to ask for a web site with a similar matrix showing linkages to best practice examples in each cell.

CLASS/ACTIVITY	STAKEHOLDER										
	Gov't Agency	Gov't Regulator	VA etc	SDO	Private	HIMSS/AMIA, etc	AMC	Prof Societies	Payers	Vendors	Leapfrog etc
Models			✓	✓	✓		✓			✓	
Use Cases			✓	✓	✓		✓	✓		✓	
Tools	✓		✓	✓	✓	✓	✓	✓	✓	✓ (and pharma)	✓
Content	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ (Pharma)	
Standards		✓		✓		✓			✓		
Papers						✓		✓			✓
Forum	✓					✓		✓			
PHR			✓	✓	✓	✓	✓	✓			
EHR	✓		✓		✓		✓	✓			
Test data sets		✓	✓	✓	✓	✓	✓	✓			

Special comments about the matrix:

“Tools” included natural language processing.

“Content” refers to knowledge content.

“Standards” means conformance and interoperability test suites.

“Papers” means white papers and policy setting.

“Forum” could include a discussion board, listserv, web site, etc.

The personal health record was cited as an example project focus.

Business Models

We could foresee funding from grants, for example using the SBIR mechanism. . The membership of an open source consortium could contribute “work in kind.” We could create a framework of software developers. There could be subscription fees.

An intriguing model exists now with MedSphere. They are building on the VA open source EHR, but their model is to charge for implementation and systems

integration services, not for the software. This is similar to the Red Hat business model for support of linux.

Next Steps

In summary, the clearest priorities emerging from the discussion were development of models, use case, and data for supporting testing and standards (conformance and validation, assuring interoperability). We also believe another opportunity exists in focusing on development of the "personal health record."

We will circulate these minutes to our participants for comments. A listserv and web repository of information can begin with support from AMIA. Dr. Yasnoff stopped by briefly and offered to post the outcome of this workshop on the NHII web site.

AMIA announced more open source activities to happen during the Fall Symposium in Washington, DC, in November 2003. There will be an open source demonstration, posters, and a panel discussion with invited expert speakers.

Next February 2004, AMIA expects to have a two day symposium in Washington, devoted to the subject of open source.

Addendum to Minutes:

A listserv has been set up by AMIA to further pursue the discussion and development of open source. The following are relevant addresses.

List-Subscribe: <http://mailman.amia.org/mailman/listinfo/open_source_task_force>, <mailto:open_source_task_force-request@mailman.amia.org?subject=subscribe>

List-Archive: <http://mailman.amia.org/mailman/private/open_source_task_force/>

A website will be constructed shortly to host these activities, which will be announced through the above listserv.