

# Who is the American Medical Informatics Association?

- Merger of three organizations in 1990
  - Society for Computer Applications in Medical Care (SCAMC)
  - American Association for Medical Systems and Instrumentation (AAMSI)
  - American College of Medical Informatics (ACMI)

# Who is the American Medical Informatics Association?

- 3500 members with mixture of physicians, nurses, computer specialists, and informaticists
- About 50% academic based. All major academic medical centers represented.
- Two major meetings each year
  - Spring Symposium – small and focused
  - Fall meeting – general theme - ~2000 attendees

# Who is the American Medical Informatics Association?

- Governed by 15 member board plus four officers
- Has 12-15 working groups who are domain focused
- Has weak ties to industry

# **Vision Statement of Proposed Project**

**Promote the development of open source elements that will provide base line functionality for academic medical centers and others and provide a base on top of which academic medical centers and commercial entities could develop higher valued functionality.**

**We need to design this venture such that commercial companies can participate while at the same time meeting the needs of researchers and educators. The purpose of the project is to both enable and support research and education as well as clinical care provided in AMCs.**

# Open Source Opportunities

- Linkage to academic medical centers
- Leading research for next step products
- Position to identify and evaluate what new ideas might be productive
- Can garner sufficient support for applications

# Open Source Project

- Identify
  - Technical elements required
  - Standards
  - Technical support issues
  - Training
  - Usage models
  - Issues best addressed in a common way
  - Evaluation

# PROPOSAL

- That AMIA undertake one or more Open Source Projects as a member service as well as a contribution to the field
  - Mobile Clinical Information Appliance (MCIA)
    - Mainly PDAs
  - Open Source Electronic Health Record

# Personal Data Assistants - Hand Held Terminals

- High Interest item
- Promising high utilization
- Low labor to produce valuable results
- Reusable software
- Need useable standards for applications



# Three Focus Areas

- Creation of Knowledge Base
- Clinical Applications
- Technological Applications

# Potential Applications

- Medication Administration Record
- Pharmacy prescribing
- Nursing bedside notes
- Specimen tracking
- Home health
- Lab Results

# Application Developments

- Patient ID and demographics
- Patient tracking
- Rounding – clinical data
- Drug knowledge base
- Clinical reference material
- Consulting
- Clinic coding and notes

# Application

- Notification
- Report (push technology)
- Collect
- Access and review
- Order
- Document and signature (voice)
- Communication (voice and e-mail)

# Example Issues to be Resolved

- Real-time vs. periodic synchronization
- Thin vs. thick client model
- Display size, characteristics
- Determine how PDAs might share data
  - shared context access across applications (CCOW)

# Potential Applications - generic

- Proximity beaming
- Bar code reading
- Token for secure ID
- Digital signature
- Voice recording
- Relevant standards
  - Work with HL7, ASTM, X12N, NCPDP, others

# Concerns

- Currency of Data
- Mobility
- Reliability
- Availability
- Accuracy
- Security
- Usability
- Training

# Issues

- Choice of Operating System
- Choice of Network Connectivity protocol
- Choice and required characteristics of hand held device
  - Color ?
  - Minimum processor speed
  - Minimum memory size
  - Bar code capability?
  - Minimum battery life
  - Size and weight



# Issues

- Synchronization
  - Synchronization stations with cradles
  - Wireless
  - Beaming
- Data Flow
  - Central Data Repository
  - Backend Application Database

# Issue – Security and Integrity

- Reliability
- Authentication of Source and Target
- Log of data movement
- Protection of patient identity
- Protection against theft and loss

# Popular Applications

- ePocrates
- HandDbase
- MedCalc
- STATE&M Coder
- AvantGo
- TealDoc
- 5 minute Clinical Consult
- Medical Spanish
- Prevention Guidelines
- Adult and Child Immunizations

# AMIA'S ROLE

- Management of overall project
- Make sure someone is responsible for each necessary component or activity
- Track activities, insure time lines met
- Provide space for any necessary face-to-face meetings
- Publicity

# AMIA'S ROLE

- Create web support functionality
- Distribution of product
- Maintenance
- Responsible for selection of appropriate components or activities
- Coordination, set style
- Insure quality

# AMIA provides ...

- One full-time individual – project manager
  - promotes concept
  - recruits participants
  - manages project
  - has one key project of his/her own
- Process Advisory Committee
- Technical Advisory Committee

# Participants

- Provides
  - Commits FTEs to projects to do a specific part
  - Some financial contribution
  - Some might do just beta test
- Receives
  - Greater return on investment
  - Use of all products

# Advantages to participants

- Reduced dependence on proprietary products and single vendors
- Well debugged software
- Reusable software
- Proven value
- Quality products



# Advantage to AMIA

- Increased value of membership
- Increased membership
- Increased value to vendor membership
- Recognition of contribution

# AMIA also

- Encourage service vendors to build additional value to free software
- Get funding support also from appropriate vendors such as Red Hat, AvantGo, PalmPilot, others