OSEHRA
Open Innovation For Health IT

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Community Development
Arlington, VA
Clyburnc@osehra.org
Custodial Agent

- 501-C-6 Not for Profit Organization
- As a result of agreement between DoD and VA
- Independent Board of Directors
- Operations of an OS Electronic Health Records (EHR) Software Development Ecosystem – Membership Organization
  - Developers
  - Users
  - Vendors and
  - Service providers.
Open Source Software

**Principles**

- The freedom
  - to run the software for any purpose.
  - to study and modify the software.
  - to copy the software
  - to improve the software.

**Benefits**

- Promote
  - Continuous Refresh of Code
  - Continuous Quality Improvement
  - Plug and Play Apps Model
  - Disciplined Documentation
  - Standards
  - New Business Models

- Avoid Vendor Lock-in
License: Apache 2.0

- The code is protected by copyright.
- The code can be used in closed source projects.
- The code can be included in projects with more restrictive licenses.
- Program that use it can be sold and licensed commercially.
- Derivative works need not be released.
- Provides a low entry path for contributors to add to the code base.
OSEHRA Development Tools

Software Quality and Certification Dashboard

Gerrit Code Review Site

Technical Journal

Build, Test & Package

Community Review

Developers & Users

Software Repository

Git Repositories

Web Site

Educational Resources
GOV (VA, HHS, DoD) OS: Museum Model

Changes and Improvements w/Community Participation

Always Current, Reusable Components, Efficient Tools

OSEHRA Activity

Improvements

Solution Providers

Commercial Activity
OSEHRA Functions for Rapid Open Innovations for Health IT

Certification Product
- Certification
- Automated Processes Meaningful Use
- Security and Ops Certification
- Global OS-EHR Certification

IT Product Development
- VistA
- AHLTA
- PHR
- Web Services
- Mobile Health
- Plug and Play
- One-Stop Complete APPs Inventory

Production Platform
- Code Repository
- Bug-Doc
- Version Control
- Configuration Management
- Fully Automatic Self-Service

R&D Community Work Groups
- Architecture
- Product Def
- Concept Dev
- VA /DOD/GOV
- Academics
- International
- PCMH, ACO
- New Delivery Models
- 10,000 membership

HIT Market Stimulation
- VA/DoD/IHS
- NIST/ONC/NIH
- Contract Driven
- Product Driven
- New Comers
- Foreign GOV
- OS Inspired
- 10% Health IT market share

VistA
AHLTA
Code Contribution-Acceptance
How does OSEHRA manage the code?

- Initial Submission

Documentation:
Requirements, Code, Testing
Maintenance, Users Manual, Tutorial,

- Licensing
- Ownership
- Contribution Agreement
- Dependencies to Proprietary
- Apply Apache 2.0

External to OSEHRA
Performance Testing
Security Testing
FDA Clearance

OS Certification
Steady State

- Testing, Testing Suites
- S/W Quality Assurance
- Unit Testing
- Functional Testing
Who is in charge?

• Critical Core Issues
  – Benevolent Dictator/Oligarchy
  – (Sponsor and a respected community leader)

• Technical Issues
  – Meritocracy- Best Solution
  – Community Enforcement

• Business Issues_ Emerging Business Models
  – Open Competition – Best Service
  – It is no longer product driven business
  – Android, Apple, Nokia and others as examples
2012 Work Groups by OSEHRA Core Functions
Development Strategy by Enabling the Community WG’s

<table>
<thead>
<tr>
<th>VistA Code (EHR)</th>
<th>Innovation Modules</th>
<th>Health IT Interoperability</th>
<th>iEHR</th>
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<tbody>
<tr>
<td>Certification Product</td>
<td></td>
<td>• Interoperability Testing</td>
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</table>
| • Meaningful Use Certification
  • Scheduling Competition
  • Certification |                    |                            |      |
| Product Development      | • Architecture     | • M-Health                  |      |
| • Code Convergence       | • Code Convergence | • PHR - Blue Button        |      |
| • FileMan Convergence    | • Drug File/Pharmacy | • Patient Centered Care    |      |
| • Web Services           | • Web Services      | • Genomics                  |      |
| • Refactoring            | • Refactoring       | • Imaging                   |      |
| • Lab Modules            | • Lab Modules       |                            |      |
| • Roll and Scroll        | • Roll and Scroll   |                            |      |
| • UI Extension           | • UI Extension      |                            |      |
| Production Platform      | • Development Tools |                            |      |
| • Development Tools      |                    |                            |      |
| • SKIDS                   | • SKIDS             |                            |      |
| • Comparison Tools       | • Comparison Tools  |                            |      |

How to work with OSEHRA?
Join the work groups!
Develop a workgroup!
## Submitted Codes

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Creator/Group</th>
<th>Repository Location</th>
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</thead>
<tbody>
<tr>
<td>VOLDEMORT</td>
<td>Ray Group</td>
<td>OSEHR Github Repository</td>
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<tr>
<td>pyVistA</td>
<td>Caregraf</td>
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<tr>
<td>RASR</td>
<td>Ray Group</td>
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<tr>
<td>RPMS</td>
<td>Indian Health Services</td>
<td>OSEHRA gets it from Pub Site</td>
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<td>AHLTA-T</td>
<td>DoD</td>
<td>OSEHRA Github Repository</td>
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<tr>
<td>Medical Domain Web Services (MDWS)</td>
<td>VA</td>
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<td>Appointment Postcard / Notification Letter v4.0</td>
<td>VA</td>
<td>OSEHRA Technical Journal</td>
</tr>
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<td>Scheduling Package Refactoring API</td>
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<tr>
<td>Surgical Quality Workflow Manager (SQWM) Phase 1</td>
<td>VA</td>
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<td>Problem List Refactoring</td>
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<tr>
<td>Janus 4.0</td>
<td>Hawaii Research Group</td>
<td>OSEHRA Technical Journal</td>
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<tr>
<td>HealtheMe – Health and Wellness Management System</td>
<td>KRM</td>
<td>OSEHRA Technical Journal</td>
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<tr>
<td>Anonymizer Functions</td>
<td>Air Force</td>
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<td>VistA M Routine Analyzer</td>
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<td>Computerized Patient Record System v29</td>
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<td>Converter from Cache to GT.M</td>
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<tr>
<td>EWD: A web application framework for GT.M and Cache</td>
<td>M/Gateway Developments Ltd.</td>
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<td>Identity Functions - FASC-N Library</td>
<td>Air Force</td>
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## Community Based OS Projects I

### Gold Disk for VA
- 20 core modules
- OSEHRA Certified
- Code Improvements
- Standardized Implementation for the Enterprise
- Foundation for Enterprise-wide Improvements

### Code Conversions
- Code bases managed and improved on by many organizations: VA, IHS, Private Sector
- Common Core of converged code
- CHCS is VistA Code
- Improve the efficiency of code base management
Community Based OS Projects II

AHLTA-Open

- AHLTA Theatre Version
- Rich Collection of Modules for Theatre Applications
- Undergoing Preparation for OSEHRA Certification
- Will soon be available for anyone’s use or commercial activities

Common Web Services

- Various approaches in Web Services have been developed
  - JANUS
  - MDWS
  - EDW
  - Others
## Personal Health Records

- VA developed Blue Button  
  - Open Source  
- KRM Developed HealtheMe  
  - Open Source  
- VA developed MDWS  
  - Open Source  
- Community Based Project for Blue Button for America  
  - Open Source

## Mobile Health: Preparation

- Deployment of mobile computing platform
- Theater Application
- Clinical Trial Application
- VA application
- A Major International Android Vendor
- Security Organization
## Community Based OS Projects IV

### Scheduling Module Competition
- RFI Last January
- Open Source Compatibility Certification by OSEHRA
- API Applications
- RFP Soon To Be Announced

### Other Innovation WG
- Refactoring
  - API’s
- Architecture
- Genomics
- Data Warehouse
- Registries
- Imaging
Notional Open Source Innovation Pathways for iEHR

- DoD
- Joint/Common iEHR
- VA
- Open Source iEHR
- AHLTA
- OSEHRA
- VistA
- RPMS
- Corporations
- Fed Agencies
- Academics
- IHS, NIH, HHS, NIST

Innovation:
Refactoring
CL-3, Ext, InFlt
OSEHRA Annual Summit

October 17-18, 2012
National Harbor
munsk@oshera.org
2012 Summit and Workshop

• Open Source: Institutionalized Permanently
• Increasing Interests in OS from Many Quarters
• Emerging Vibrant Collaborative Community
• Diversity of Activities
• Power of Innovation will Overcome the Challenges
• Strategic (Collaborative) Priority to Emerge
• Seeking Community (all of us) Roadmap
# First Annual Open Source EHR Summit & Workshop

**Day 1: Plenary Sessions**  
**Wednesday, October 17, 2012**  
**Woodrow Wilson Ballroom**

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<tr>
<th>Opening Session – The Future of Open Source Software and the EHR</th>
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<tr>
<td><strong>Session Chair:</strong></td>
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<tr>
<td>James Peake, MD, Chairman, Board of Directors, OSEHRA and Former Secretary, Dept. of Veterans Affairs</td>
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<td><strong>Honorable James Peake, MD, Chairman, Board of Directors, OSEHRA and Former Secretary, Dept. of Veterans Affairs</strong></td>
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<td>8:30 AM</td>
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| John Halamka, MD, MS  
CIO, Beth Israel Deaconess Medical Center  
Member, and Board of Directors, OSEHRA  
Open Source in Healthcare Has Arrived | Robert Wentz  
President & CEO, Oroville Hospital, CA  
OSEHRA Panel Discussion  
Seong Ki Mun, PhD  
President & CEO, OSEHRA  
Open Source EHR Agent: An Engine of Rapid Innovation Looking at the Future |  |
| Health IT Innovations in the Department of Veterans Affairs |  |
| **Session Chair:** |  |
OSEHRA Business

• OSEHRA is a OS facilitator.
• OSEHRA promotes OS activities.
  – New Businesses are Emerging.
  – New Markets are Emerging – State Level
• OSEHRA does not compete with its community members.
• OSEHRA wants members to make money by offering the best services with the best OS products.
• OSEHRA lowers barriers of entry and the risks.
InterSystems

DSS inc

Vista Experts

RayGroup International

AssureRx Health

Medsphere

Transforming Healthcare Through Open Source

Northrop Grumman

AudioCare Systems

AEGIS
Agility and Open Source

Cultural Change
- Agile Acquisition
- Agile Management
- Agile Development

Tools for Agility
- Transparency
  - Process
  - Products
- Open Development Environment
- Real Time Collaboration
- Community Establishment and Participation

Excellence in PM - Uncompromised
- Disciplined Documentation
- Continuous scrutiny for Quality
- Milestones and Schedule

Open Source Software: Currency for Agility

OSEHRA
Open Source Electronic Health Record Agent
Open Source in Practice: We are not alone!

Hard Ware (Engine) based industry
Cannot keep up with Customer Demands

Cost of software exponentially increasing

Car/Air Craft Companies threatened by Information and Entertainment Industry:
Apple and Google

Difficult to Manage Version Control

Difficulties in SW support for 20-50 years.

Help!
OSEHRA Strategic Priority

Community Involvement Sought

1. Joint community effort to overcome barriers in Open Source: Expand the Market
2. Common Code Base with Modular Capabilities
3. Vibrant Community with more Developers
5. Voluntary Standard Setting Body and Facilitator
Innovation Agent
Open Source on the Move

Great Hurdle
Ready for a long run
With OS Community
Join the movement.

Governance
Vision
Process
Tools
IT Infrastructure
Repository

Open Source Software:
“Persistent Wind of Innovation”
Gen James Peake, MD
Chairman for the Board