

# VA OSEHRA Scheduling (VOS) Third Place Scheduling Contest Solution

28th VistA Community Meeting  
January 18<sup>th</sup>, 2014

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Parsons Institute for Information Mapping



## About Parsons Institute for Information Mapping



Founded in 2002, PIIM is a Research Institute of The New School in New York City

Expertise in information categorization, knowledge representation, information taxonomy development, information logic and ranking/scoring, knowledge visualization, and Graphic User Interface (GUI) and User Experience Design (UXD)



# The VA-OSEHRA Scheduling “Challenge”

## An open contest for an Enterprise Medical Scheduling solution

### About the Contest

- VA commissioned OSEHRA community to manage and evaluate an open source contest
- Awards announced, up to three winners of up to \$3M each
- Objective was to demonstrate medical scheduling capabilities working with VistA
- Strong emphasis on open source, open systems, and open standards
- 300 requirements identified in solicitation; ~240 were “pass-fail” evaluation points
- 6 month window, in January 2013 with submissions due in June 2013.

# The HP Open Community Team is Established

## A rich team emerges...

- An open community based on OSS principles and “meritocracy”
- Allow anyone to join the team based upon the merit of their contribution
- Build an architectural proof-of-concept
- Focus on long-term project needs and not feature/function priorities (e.g., SOA)
- Commitment to donate any prize proceeds to a Veteran Service Organization
- We at PIIM joined the team to offer our expertise and learn from the knowledge and experience of other’s in the community



# What Transpired?

## A rich team emerges...

- Community interest and uptake was tremendous
  - Approximately 8 organizations joined within the first few weeks
  - Many community members were companies who had never worked together before
  - Commitment to donate contest proceeds was not a detractor
- We were slow out of the “starting gate”
  - Problems with delivery leads, personnel swapping, establishing roles and processes
  - Took us some time to determine how to execute the meritocracy
- We hit a stride
  - Processes were established along with a community culture of trust
  - Team executed based upon internal stakeholder priorities; became a high functioning team



# What was built

## An open contest for an Enterprise Medical Scheduling solution

### Functional View

- Reviewed contest functional requirements and prior VA Scheduling documentation
- Reviewed GAO and other external sources
- Identified key pain points (“Big Rocks”) most affecting long-term VA success in this space
  - “Truth in Scheduling” – an authoritative source
  - Support medical home, telemedicine, and non-human resource scheduling (e.g., rooms and equipment)
  - UI/UX enhancement
  - Addressing the timezone challenge
  - Inherent flexibility to adapt to policy and business rules

The screenshot displays a web-based medical scheduling application. At the top, it says "Appointments" and "You have 2 scheduled appointments." Below this is a navigation bar with buttons for "Make Appointment", "Reschedule Appointment", and "Cancel Appointment", along with navigation arrows and buttons for "Back", "Month", and "List".

The main area is a calendar grid for the year 2011, with columns for each day from Sunday (11/15) to Saturday (11/21). The rows represent time slots from 6:00am to 7:00pm. A specific appointment is highlighted in orange on Tuesday, 11/17, at 10:00am, labeled "Clinic B EKG". Another appointment is shown on the same day at 10:30am, labeled "Clinic B EKG Follow-up".

On the right side, there is an "Event Details" panel for the selected appointment. It includes the following information:

- Appointment type: Clinic Visit
- EKG
- Reason for visit: "Referred by my primary care physician"
- Location: Clinic B, Suite 403, Facility III
- 2455 Maple Road, Morristown, NJ 07960
- Telephone: (212) 111-1111
- Provider: Dr. Kent Heart, Cardiologist
- Date: 11/17/2011
- Time: 9:30am-10:00am

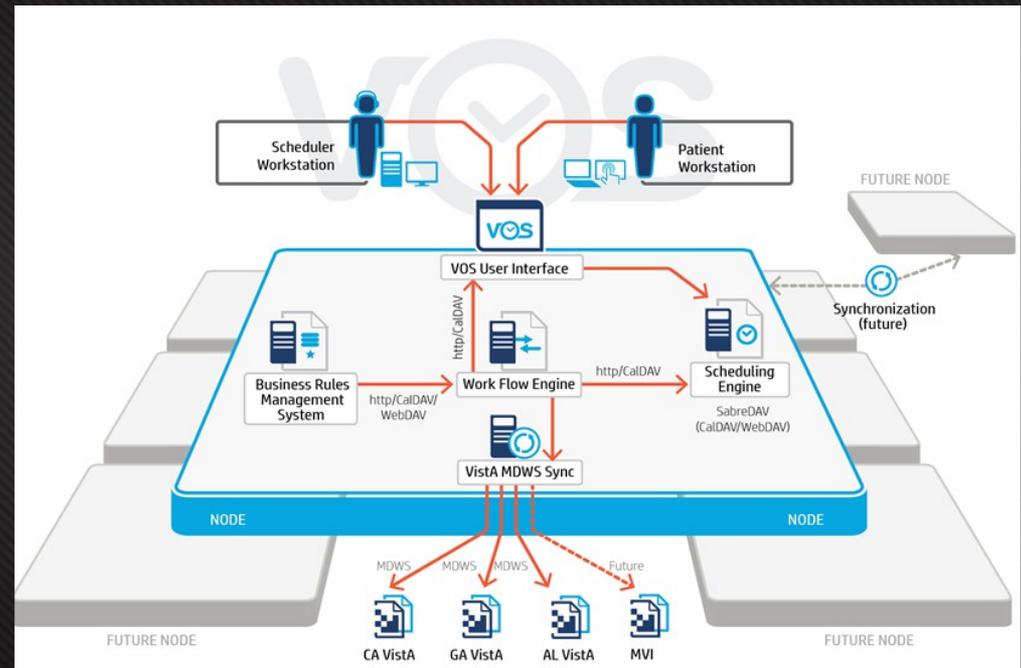
At the bottom of the screenshot, there is a smaller inset window showing a "Where would you like to go?" section with icons for "No location", "Clinic A", "Clinic B", and "Home".

# What was built

## An open contest for an Enterprise Medical Scheduling solution

### Technical View

- Emphasis on open architecture, open source, and mature standards (CalDAV)
- Establish SOA Scheduling Service with reusable / leverageable infrastructure
- Provide business rules engine, workflow engine
- Node-based implementation to allow for deployment flexibility
- Support for role-based system behavior
- Web-based implementation in n-tier environment en route to cloud/mobile device support
- One-way sync (write) to legacy VistA
- Demonstrated use of off-the-shelf COTS client against VOS back-end (Mozilla Sunbird)





**Summary**

Location:  
**Mental Health**  
**Alabama VA Medical Center**

Visit type:  
**Initial (60 min)**  
**Telehealth**

Provider:  
**Clark Brown**  
**Psychiatrist**

11:00 AM-12:00 PM

When would you like to come in?

Go to:

**FILTERS** Provider:

	Tue, 08/20	Wed, 08/21	Thu, 08/22	Fri, 08/23
AM	▶ AM 2 available	▶ AM 2 available	▶ AM 2 available	▶ AM 2 available
11:00 AM-12:00 PM	2 available	2 available	2 available	2 available

**DEMONSTRATION**

« Back Next » Cancel

**An open contest for an Enterprise Medical Scheduling solution**

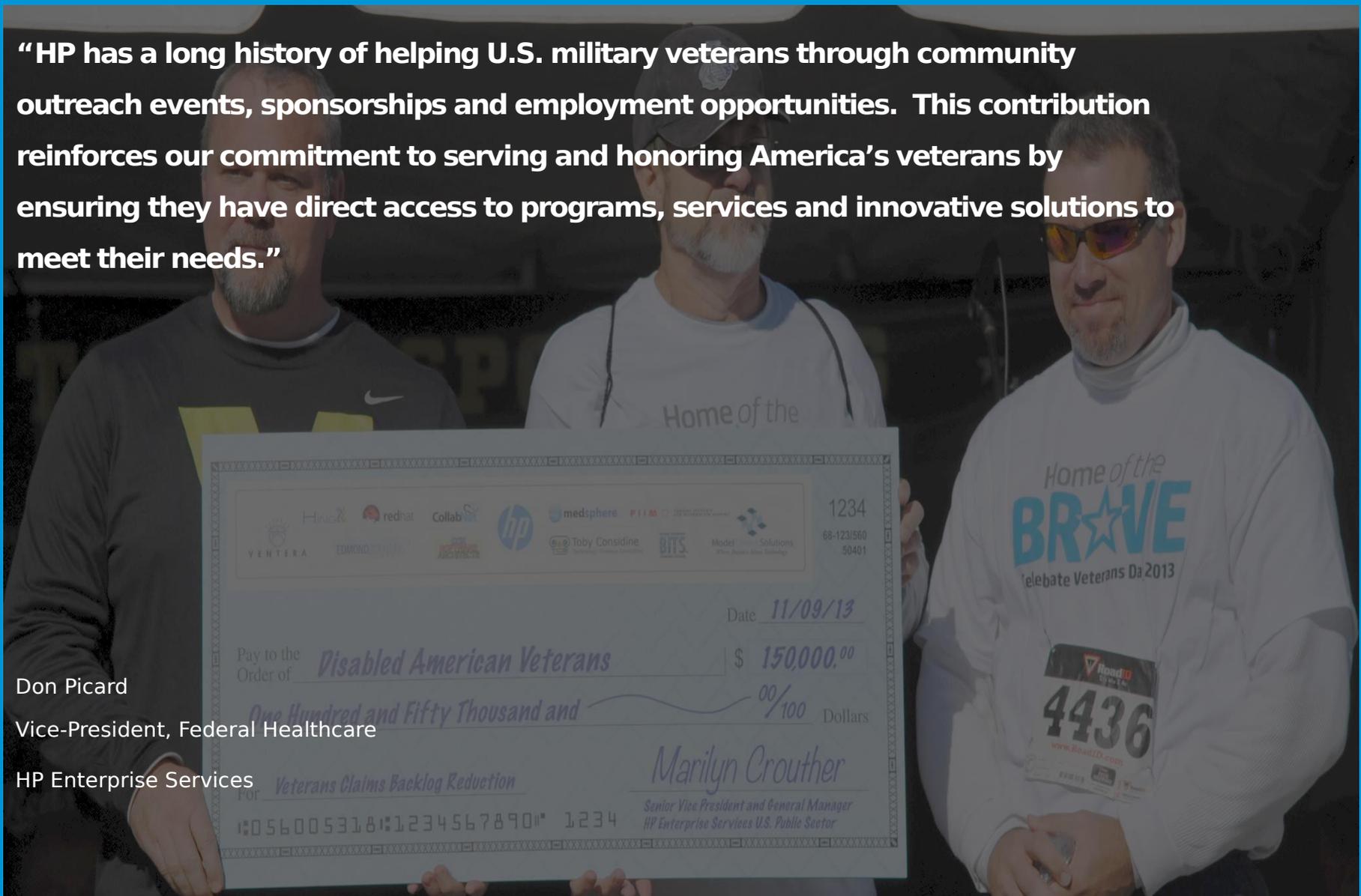
\$350,000 – Iraq and Afghanistan Veterans of America (IAVA)

\$150,000 – Disabled American Veterans (DAV)

\$10,000 – Fischer House

\$10,000 – Paralyzed Veterans of America (PVA)

“HP has a long history of helping U.S. military veterans through community outreach events, sponsorships and employment opportunities. This contribution reinforces our commitment to serving and honoring America’s veterans by ensuring they have direct access to programs, services and innovative solutions to meet their needs.”

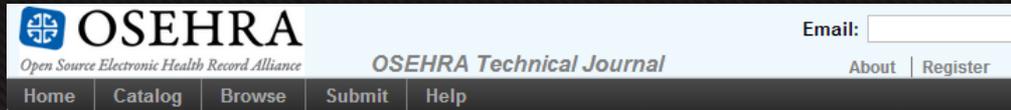


Don Picard  
Vice-President, Federal Healthcare  
HP Enterprise Services

Slide courtesy of HP



## For More Information:



### VA OSEHRA Scheduling (VOS) solution

Rubin K.  
HP Open Community Team



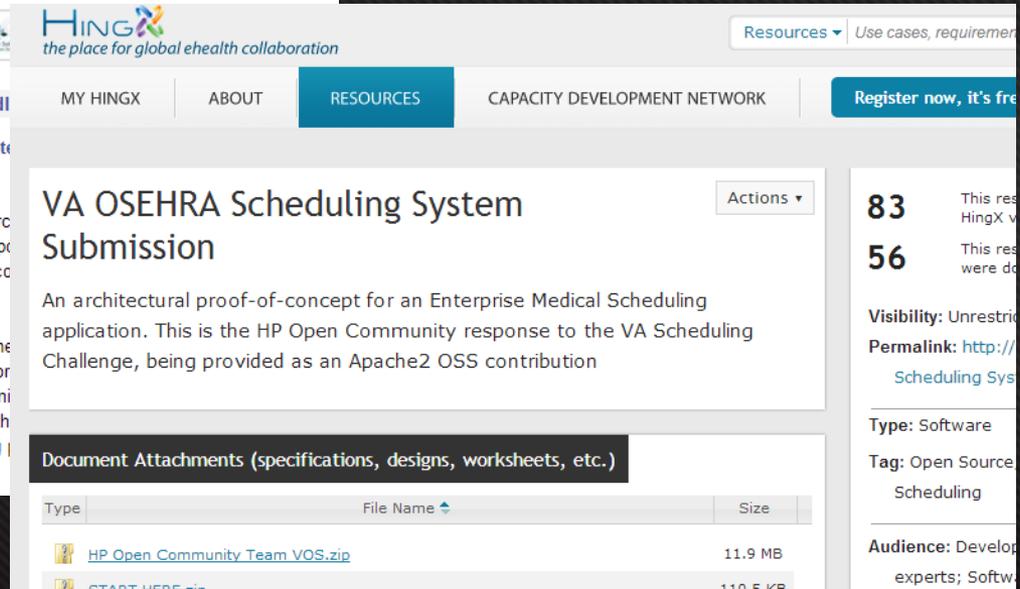
Please use this identifier to cite or link to this publication: <http://hdl.handle.net/10909/98>

Published in **OSEHRA Technical Journal - Special Issue: VA Scheduling Contest**

Submitted by Wes Turner on 11-15-2013.

This submission to the scheduling contest primarily focused on developing an architectural proof-of-concept for an enterprise-scale scheduling solution. The implementation is very much a proof-of-concept in patient care or deployed settings.

The contest submission was developed using open source software development. The contest submission was developed using open source software development anchored an open submission team and invited any organization to join. Contributors were selected on the merit of their contribution and skills, resulting in a community of over 10 organizations. The result was a submission reflecting a broad base of health industry professionals bringing together multiple disparate partners in a short time resulting in a compelling VA Scheduling Contest prize-winners.



Resources Use cases, requirements

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## VA OSEHRA Scheduling System Submission

Actions

83 This resource has been viewed 83 times on HingX

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**Visibility:** Unrestricted

**Permalink:** <http://hdl.handle.net/10909/98>

**Type:** Software

**Tag:** Open Source Scheduling

**Audience:** Developers, experts; Software

**Document Attachments (specifications, designs, worksheets, etc.)**

Type	File Name	Size
File	<a href="#">HP Open Community Team VOS.zip</a>	11.9 MB
File	<a href="#">START HERE.zip</a>	110.5 KB

<http://hdl.handle.net/10909/98>

<http://www.hingx.org/VOS Scheduling System>