

Open Source Technical Support and Working Group Services for VA VistA

SLIN 0002AB – Initial Submission

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SWOT Summary



SWOT Overview

- **Three open source candidates reviewed**
 - Appointment Postcard Notification Letter v4.0
 - OpenInfoButton
 - XU Digital Signature
- **Initial SWOT analysis methodology developed, will be enhanced and matured for subsequent quarters**

Note: VistA 4 Roadmap was not received as GFI in time to be included in the analysis for this initial SWOT.

Dimension Definitions

Strengths/Weaknesses

SWOT Dimension	High Value Strength (1-5 Scale, 5 is High)	Low Value Weakness (1-5 Scale, 1 is Low)
Functional Fit with Requirement	Function fills substantive functionality gap and is of value to users.	Function is not needed or is a duplicate of existing functionality.
Technical Fit - Data	Code is a strong fit with data structures in VistA. Implementation would be low-risk in regards to corrupting existing data.	Code is not a fit with data structures in VistA and would require re-architecting to implement.
Technical Fit - API	Code fits well with VistA API structures. Code would integrate with other VistA modules and would be easily callable.	Code is not a fit with API structures in VistA and would require re-architecting to implement.
Code Quality	Code is safe, compliant, functional. Code is OSEHRA Level certified, fully tested, and highly reliable in providing function / feature.	Code has bugs, limited or no documentation, or potentially unreliable.
VistA 4 Product Roadmap - Architectural Fit	Code will fit well into existing Roadmap plans and will continue to fit with anticipated evolution of VistA and the Roadmap.	Code will be quickly obsolete or will not work due to planned changes in the Roadmap.
Time-to-Value	Rapid, low-risk implementation. Use of code may be quicker and more valuable than internal development and implementation by VA.	Use will not improve time-to-value and may actually decrease time-to-value in VA overall due to implementation complexity / risk or other issues.

Dimension Definitions

Opportunities/Threats

SWOT Dimension	High Value Opportunity (1-5 Scale, 5 is High)	Low Value Threat (1-5 Scale, 1 is Low)
Intellectual Property Rights / Copyright, Licensing Obligations	Use of code is free and clear with no IP / legal issue.	Use of code puts VA or open source community at risk of legal action.
Open Source Community Involvement	Use of code viewed as enhancing the value and engagement of the community.	Adoption of code could result in reduction of community involvement. Use of code not viewed as positive for the community.
Veteran Experience	Use of code will greatly enhance Veteran experience.	Use of code may damage Veteran experience.
Quality Risk	Existing VA software is high-quality and provides opportunity for VA to add value to the open source community.	Existing VA software quality is low, leaving VA vulnerable.
Political Risk	Open code addresses or resolves organizational or community issues if incorporated into VistA.	Existing code already in use. Could cause organizational issues for VA if open code is used.

SWOT Analysis Approach

- Develop draft SWOT analysis elements
- Review SWOT analysis elements among OSEHRA Team
- Assess candidate products against SWOT analysis elements
- Score candidate products against the SWOT analysis elements
- Identify key decisional elements for each candidate product
- Develop SWOT table and summary for each candidate product

Appointment Postcard Notification Letter v4.0



Appointment Postcard Notification Letter v4.0

- **Overview**

Enhances automatic notification functionality for upcoming scheduled patient visits

- **Benefits**

- Would make patient-friendly scheduling reminder system
- Already proven in regional deployment
- Would be available to all Veterans

- **Recommendation**

Proceed for further analysis and potential intake

Strengths/Weaknesses

SWOT Dimension	Rating	Evaluation Comments
Functional Fit with Requirement	4*	Good enhancement to existing functionality - notification feature not currently available in VistA. This code would enhance Veteran experience, but not a critical need.
Technical Fit - Data	5	High value - uses the existing data structures within Fileman to store appointment card. No external database necessary.
Technical Fit - API	4	Submission adds a new menu to the VistA system which follows convention for this type of change. Other non-menu APIs may require more analysis
Code Quality	3	Certified to OSEHRA Level 2™ - this was an early certification prior to the certification levels being defined. Code is at least good quality.
VistA 4 Product Roadmap - Architectural Fit	3**	Unknown - tbd. How does this fit with Epic - might already be covered.
Time-to-Value	5*	Can be implemented quickly and will use existing infrastructure.

Note: Part of VHA - class 3. Most class 3 does not have any unit tests - to allow automatic run. Manual test required. Tests had to be developed by OSEHRA. Mumps side helpful. Cache only. Not an issue for VA.

Opportunities/Threats

SWOT Dimension	Rating	Evaluation Comments
Intellectual Property Rights / Copyright, Licensing Obligations	5	VA developed this, so no copyright issue. Before Apache 2.0 license. No issues.
Open Source Community Involvement	4	Open source could take this implementation and do their own Cache pages, keep the Mumps part the same. No threats. SW uses proprietary feature of the system cache. Requires additional development by open source folks - won't run in GTM environment.
Veteran Experience	4*	Would enhance Veteran experience with VA.
Quality Risk	N/A	N/A since VA does not currently have this.
Political Risk	3	Neutral - fine politically, no issues.

Appointment Postcard Notification Letter v4.0

– SWOT Summary

	Helpful to achieving time to value	Harmful to achieving time to value
VA Perspective (VistA Fit, Business Value)	<p><u>Strengths</u></p> <ul style="list-style-type: none"> • Enhances existing functionality • Technical fit with VistA would minimize time-to-value • Code certified to OSEHRA Level 2™ • Already proven in regional deployment 	<p><u>Weaknesses</u></p> <ul style="list-style-type: none"> • None
External Impacts (Risks, Upside)	<p><u>Opportunities</u></p> <ul style="list-style-type: none"> • Would improve Veteran experience by improving the user friendliness of the scheduling process • No copyright or licensing issues 	<p><u>Threats</u></p> <ul style="list-style-type: none"> • None

OpenInfoButton



OpenInfoButton

- **Overview**

Implements context-aware knowledge retrieval on demand from more than 30 online resources to aid in clinical decision support

- **Benefits**

- Code would provide a common mechanism for incorporating current peer-reviewed medical research and evidence into clinical decision making

- **Recommendation**

Proceed for further analysis and potential intake (if code is not already implemented within eHMP)

Strengths/Weaknesses

SWOT Dimension	Rating	Evaluation Comments
Functional Fit with Requirement	4*	Provides context sensitive help to aid in clinical decision-making. Patient history is included to give better results. Included in the meaningful use criteria. Does not currently exist in VistA (but may be part of eHMP). VA wanted to have this in VistA since it supports meaningful use. Need to confirm level of urgency.
Technical Fit - Data	4	No impact on existing data architecture, limited data interaction. Response back from query is displayed but not stored in VistA.
Technical Fit - API	4	No impact on existing architecture, limited interaction so no API or API issues. Response back is displayed but not stored in VistA. Rapid performance is the key - performance time not assessed as part of the certification process.
Code Quality	4	Certified to OSEHRA Level 3™ - highly reliable.
VistA 4 Product Roadmap - Architectural Fit	3**	Unknown - tbd. Makes most sense for this capability to be integrated with eHMP. Sample version of eHMP shows functionality, but is using a link to the University of Utah.
Time-to-Value	5*	This is a Java-based program - would be easy to implement and get up and running quickly. All components for implementing this are part of the TRM.

Note: Request and responder pair based on Java. Signs into NLM, queries data for contextual clinical decision-making information. Also other resources. Developed by VHA - Innovations, University of Utah.

Opportunities/Threats

SWOT Dimension	Rating	Evaluation Comments
Intellectual Property Rights / Copyright, Licensing Obligations	5	No issues - free and clear.
Open Source Community Involvement	4	No threat to supplant anything else - would be positively viewed.
Veteran Experience	5*	Allows broader healthcare expertise to be quickly applied to Veteran healthcare thereby improving care. Experience impact will be indirect.
Quality Risk	N/A	N/A since VA does not currently have this.
Political Risk	3	Neutral - fine politically, no issues.

OpenInfoButton – SWOT Summary

	Helpful to achieving time to value	Harmful to achieving time to value
VA Perspective (VistA Fit, Business Value)	<u>Strengths</u> <ul style="list-style-type: none"> Enhances existing functionality Technical fit with VistA would minimize time-to-value Code certified to OSEHRA Level 3™ Java-based program can be quickly implemented 	<u>Weaknesses</u> <ul style="list-style-type: none"> None
External Impacts (Risks, Upside)	<u>Opportunities</u> <ul style="list-style-type: none"> Would improve Veteran healthcare quality by facilitating broad access to provider-level healthcare information No copyright or licensing issues 	<u>Threats</u> <ul style="list-style-type: none"> None

XU Digital Signature



XU Digital Signature – SWOT Summary

- **Overview**

Consists of three files providing the interface between Delphi executables and the built-in Windows security functions released under the Apache 2.0 license

- **Benefits**

- Code would replace incompatible licensed source codes within CPRS with the Apache 2.0 licensed version

- **Recommendation**

Consider trade-off of eliminating potentially minimal copyright risk with the VA resources required to implement these files which provide no new functionality

Strengths/Weaknesses

SWOT Dimension	Rating	Evaluation Comments
Functional Fit with Requirement	1*	Existing functionality under Mozilla Public License version 1.1 is currently in use by VA, The OSEHRA Certified version, which is released under the Apache 2.0 license, duplicates the previous functionality.
Technical Fit - Data	5	Minimal interaction into the VistA data structures. No changes, good fit.
Technical Fit - API	4	APIs are similar. CPRS calls are the same as those currently in use and original files.
Code Quality	5	Certified to OSEHRA Level 4™ - highly reliable.
VistA 4 Product Roadmap - Architectural Fit	3**	Low value - if there are updates to these functions, code will need to be updated. Should CPRS be replaced, submission will not be useful.
Time-to-Value	3	Time-to-value is high, however, the magnitude of the value is relatively low. The XUDigSig submission is three Delphi files. Replacement of Mozilla licensed files with the certified Apache 2.0 version of the file would be simple and CPRS would be unable to detect the difference.

Note: Developed by community under OSEHRA leadership. All items licensed under Apache 2.0 - OSEHRA standard. Three new files developed. FOIA release is problematic. VA testing required. Should be easily taken in. Currently low priority due to lack of new functionality.

Opportunities/Threats

SWOT Dimension	Rating	Evaluation Comments
Intellectual Property Rights / Copyright, Licensing Obligations	5*	The Apache 2.0 License files are free and clear with copyright to OSEHRA, but have a very permissive license allowing VA to utilize the files as deemed necessary. OSEHRA created the Apache files since Mozilla licensed files could not be distributed as part of OSEHRA repositories. Opportunity to eliminate current licensing issues.
Open Source Community Involvement	3	Neutral - nothing new is being created but there is minimal change. License does allow for opportunities but there are other paths forward for this functionality.
Veteran Experience	3	No impact.
Quality Risk	5	Existing VA software is not at risk, no issue.
Political Risk	3	Neutral - no risks nor strong opportunities.

XU Digital Signature

	Helpful to achieving time to value	Harmful to achieving time to value
VA Perspective (VistA Fit, Business Value)	<p><u>Strengths</u></p> <ul style="list-style-type: none"> • Technical fit with VistA would minimize time-to-value • Code certified to OSEHRA Level 4™ • New files eliminate copyright issue by using Apache 2.0 license, eliminating copyright risk 	<p><u>Weaknesses</u></p> <ul style="list-style-type: none"> • Duplicate of existing functionality • No improvement of Veteran experience
External Impacts (Risks, Upside)	<p><u>Opportunities</u></p> <ul style="list-style-type: none"> • Adoption would eliminate potential copyright issues 	<p><u>Threats</u></p> <ul style="list-style-type: none"> • None