



OPEN SOURCE APPLICATIONS FOUNDATION

Executive Summary

Requirements analysis report for extending Chandler functionality for use in university environments

The Open Source Applications Foundation (“OSAF”) is developing a next generation, open source personal information manager, code-named Chandler. From two all-day meetings in December 2002 and January 2003 with representatives from over a dozen universities it was concluded that Chandler could be a compelling application for higher education.

OSAF’s original development scenario for Chandler targeted the needs of individuals and small organizations rather than the needs of higher education with its accompanying complex mix of existing infrastructure. Encouraged by the response from the university representatives, the Andrew W. Mellon Foundation awarded a grant to OSAF to determine the incremental requirements and to develop a set of recommendations for a higher education version of Chandler.

To create this plan, OSAF worked with representatives from universities including both CIOs and technical domain specialists. These representatives participated in working groups based on areas of expertise, providing key input into both requirements and recommendations. The fruits of this collaboration are presented in the document, [Chandler for Higher Education: Requirements and Recommendations](#).

Canoga – our 1.0 release – will be the first stable and robust release of Chandler. Canoga will target mainly info-centric individuals and decentralized groups, and provide core email, small workgroup calendaring, contacts and tasks functionality within a strong information management foundation. The higher education version of Chandler, code-named *Westwood*, will be built on top of Canoga. **We believe the key incremental requirements and recommendations for Westwood are:**

Support nomadic usage and central repositories

A single user might need to access her information from many different machines throughout the day. Some of the computers may be personal machines; others may be public kiosks or lab machines, where personal data is deliberately not preserved.

Westwood clients will be able to access remote centralized Chandler repositories using our Repository Access Protocol (RAP). Information on the central repository can be synchronized with personal machines for offline or disconnected usage or simply faster access.

To address scalability issues at a university level, OSAF will deliver a pilot version of a centralized server with Westwood. This server will provide scalable, high-performance servers with administrative control, reliability and robustness not offered in the peer-to-peer configuration. As the product

matures, future versions will provide additional server robustness and specialized administration tools to ensure successful campus-wide installations.

Standards based Calendar Access Protocol (CAP) client

In addition to decentralized workgroup calendar solutions, universities also need centrally managed calendars. Westwood will be designed as a CAP client to ensure interoperability with future versions of Calendar servers such as Oracle Calendar (Corporate Time), Sun One, etc. that will support the emerging CAP standard. By embracing an open industry standard, the Westwood client will provide flexibility and reduce 'lock-in' to single vendor solutions. Chandler will also include designation/delegation and resource scheduling features to provide a full client calendaring solution for universities.

Full interoperability with existing standards based infrastructure

In addition to POP functionality, Chandler will be a well-behaved IMAP client. In particular, Chandler will not try to download all messages from all folders at the start of every session. Instead, Chandler will use heuristics and user overrides to determine when, and which messages to download.

Chandler will allow users to continue using other IMAP clients if they choose. Chandler meta-data such as annotations and categorizations will not be reflected back to the IMAP server. Instead, we use a technique we term data compositing to provide richer information management capabilities for Chandler while ensuring IMAP server compatibility with other email clients. We also intend to use data compositing to integrate LDAP and CAP data into Chandler.

Chandler will be able to synchronize contact and group information with LDAP directories. We will also support LDAP for authorization and access control. Chandler will support schema transformations to accommodate the many different LDAP configurations in universities.

Higher education institutions and OSAF share a respect for strong adherence to technical standards. We are pragmatically committed to supporting important emerging standards such as CAP as a calendar protocol, and Shibboleth as a federated policy framework

Robust security framework

We will create a security framework for data sharing based on existing standards and best practices. The foundation of the architecture will be TLS for transport layer security, and SASL for authentication. This architecture guarantees that no password will ever be transmitted in the clear.

To ensure Chandler is a trustworthy application, we will perform security audits for major design decisions and code reviews. We will support pluggable security extensions and allow numerous policies to be configurable so that each institution can determine their own safety and convenience trade-offs. Security considerations will always be designed into user interface implementations, communicated clearly where necessary, and transparent to the user where achievable. This will ensure that security is not just theoretical, but practiced in every day usage.

Conclusion

Openness is critical to the success of the Chandler project. We rely on it to develop the best possible solutions, to allow institutions to modify Chandler to better meet their needs and to provide users with ultimate control over their destiny. Chandler is available under open source terms and free of

charge. Our development is also open: we invite interested parties to get involved and help Chandler mature.

We believe this plan complements the excitement of the original Chandler vision with a set of down-to-earth recommendations for meeting the particular needs of universities.

We hope this plan will result in a commitment by CSG members to deploy Westwood. If so, this document will form the basis for a subsequent funding request to the Andrew W. Mellon foundation for the implementation of a higher education version of Chandler.

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