

# Building a Champagne Helpdesk on a Beer Budget

Christian J. Sinnett  
Oregon State University  
IS Technology Support Services  
Corvallis, OR, 97331  
(541) 737-9156

chris.sinnett@oregonstate.edu

Tammy Barr  
Oregon State University  
IS Technology Support Services  
Corvallis, OR, 97331  
(541) 737-5404

tammy.barr@oregonstate.edu

## ABSTRACT

Over the last several years many attempts have been made to obtain commercial helpdesk software for the University. In each case the initial investment and recurring costs far exceeded available funding. With dwindling budgets and increased focus on creating efficiencies, it was imperative that we identify an inexpensive, yet powerful, helpdesk solution for the campus.

The cost savings generated by using Open Source software can be substantial. Server licenses and commercial helpdesk solutions can cost tens or hundreds of thousands of dollars annually. Open Source offers free solutions that can be used as-is or enhanced to meet your needs. Oregon State University has successfully leveraged Open Source software to move forward a central Helpdesk Project that was otherwise cost prohibitive.

In this poster session we will present the pros and cons of Open Source development. We will describe the OSU Helpdesk, the current status of the project, and present to-date and anticipated costs. We'll present a live demonstration of OSU Helpdesk as well as links to our demonstration site, source code, and documentation.

## Categories and Subject Descriptors

K.6.1 [Management of Computing And Information Systems]: Project and People Management – *Strategic information systems planning*

## General Terms

Management, Documentation, Standardization,

## Keywords

Helpdesk, Open Source. Management tools, Support tools, Call Tracking, Knowledgebase, Inventory, Scheduling, Service Level Agreements

## 1. INTRODUCTION

Oregon State University, like many universities, tends to have a very decentralized IT support structure. Information Services, the central IT organization, maintains the core infrastructure,

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee.

*SIGUCCS '04*, October 10-13, 2004, Baltimore, Maryland, USA, Copyright 2004 ACM 1-58113-869-5/04/0010...\$5.00.

telecommunications, central computing systems, and provides email and contract desktop support for approximately one half of campus faculty and staff. The remaining half of the campus is supported by the individual colleges and departments.

In January, 2003, Technology Support Services (TSS), a division of the University's central Information Services unit, decided to move forward with development of a scalable helpdesk solution that could be used by any unit on campus. The project was spearheaded by I.S. Computer Consulting, the student-staffed helpdesk, which provides telephone and email technical support to the entire campus.

Commercial products such as Remedy and Heat were reviewed and found to be cost prohibitive based on initial purchase price, system administration overhead, and recurring maintenance costs. Custom applications developed by various campus support units were evaluated but these were found to be incomplete or difficult to maintain, especially as the programmers were often students who moved on once they completed their degree programs. Several Open Source programs were also evaluated and The Mozilla® Organization's Bugzilla™ was determined to be the best match for our needs.

## 2. THE PROS & CONS OF OPEN SOURCE SOFTWARE

Implementing Open Source software can be an excellent way to reduce costs when budgets are dwindling. However, institutions considering Open Source software need to weigh the advantages and disadvantages carefully before making a decision based solely on cost (see Table 1).

## 3. OSU HELPDESK FEATURES

### 3.1 Call Tracking Module (2<sup>nd</sup> Qtr 2004)

- Web Based Interface
- Customers and or technicians can enter support calls and are given a request number
- Email notification provides link back to support request
- Link to Knowledgebase module
- Link to Schedule module
- Multiple queues per install allows instant transfer of support requests between support units

**Table 1. Pros & Cons of Open Source in Education**

<b>Proponents Say</b>	<b>Opponents Say</b>
<u>Total Cost of Ownership</u>	<u>Total Cost of Ownership</u>
Open Source has a much lower price (True)	Some software isn't compatible with Open Source (True)
Total Cost of Ownership is lower (Maybe)	
<u>Features &amp; Quality</u>	<u>Features &amp; Quality</u>
Open Source can be more customized (True)	There are no Open Source solutions for some school needs (True)
Open formats are better (True)	Some curriculum software is incompatible with Open Source (True)
Open Source is more network friendly (True)	Proprietary software has more features (True)
Open Source is more reliable (Maybe)	Proprietary software is more user friendly (Maybe)
Open Source is more secure (Maybe)	Open Source is not mature enough for schools (False)
Open Source is more powerful (Maybe)	
Open Source supports better curricula in technology (Maybe)	
<u>Deployment &amp; Maintenance</u>	<u>Deployment &amp; Maintenance</u>
Open Source makes license management easier (True)	Open Source is harder to deploy (Maybe)
With Open Source you only pay for what you need (True)	Proprietary software offers better services & support (Maybe)
Open Source means greater independence from companies (True)	
Open Source lets teachers & students take software home (True)	
<u>Users &amp; Migration</u>	<u>Users &amp; Migration</u>
Some Open Source software is just as easy to learn to use (True)	Users are more familiar & comfortable with proprietary software (True)
	Migration is too expensive (Maybe)
	It's difficult to integrate Open Source & proprietary solutions (Maybe)
<u>Free Markets &amp; Choice</u>	<u>Free Markets &amp; Choice</u>
Proprietary formats lead to vendor lock in (True)	Schools need proprietary software to use some third-party programs (Maybe)
Software should be a commodity (Maybe)	
Proprietary software leads to monopolies (Maybe)	
<u>Principles &amp; Rights</u>	<u>Principles &amp; Rights</u>
Open Source is community-driven & community-serving (True)	Schools don't have the luxury of experimenting (Maybe)
Software is better when it's transparent (True)	The best courseware will be more compatible with proprietary software (Maybe)
Open Source is more empowering (True)	Open Source threatens intellectual property rights (False)
The debate is really about philosophy, not money (Maybe)	Open Source is anti-business, anti-American, etc. (False)
Open Source software will mean computers for everyone (False)	Proprietary companies are already making their software transparent (False)
Open Source will protect civil rights (False)	

- Flexible security allows various levels of access
- Built with common Open Source tools: Perl, PHP & MySQL
- Local user database or LDAP authentication

### 3.2 Knowledgebase Module (2<sup>nd</sup> Qtr 2004)

- Keyword, natural language, exact phrase, and document ID searches
- Displayed articles ranked by relevance
- Articles can be made (in)visible to various groups of users
- Documents transferred from Call Tracking module can be edited and approved prior to posting
- Document history retained for review or to revert to prior document
- Sort search results by document ID, title, number of views, date modified

### 3.3 Scheduling Module (2<sup>nd</sup> Qtr 2004)

- Scheduled support requests added to queue master calendar and individual technician's calendar
- Display multiple technician's appointments on one screen
- Appointments can be exported for import into Outlook, PDA or other calendaring tools
- Change to Call Tracking support request automatically updates calendar
- Link from calendar entry to originating support request

### 3.4 Inventory Module (3<sup>rd</sup> or 4<sup>th</sup> Qtr 2004)

- Inventoried items linked to customer, department, support team, support request
- Inventory fields include: item, location, serial number, MAC address, software installed, IP address, and much more

### 3.5 Service Level Agreement Module (1<sup>st</sup> Qtr 2005)

- Linked to customer, department, support team, inventory item
- Table view
- Contract printout

## 4. JUNE 2004 STATUS

As of June, 2004 the project continues to move forward:

The initial version of the Call Tracking module has been in use for over a year and has been released to the Open Source community. Several campus support units are evaluating it for use in a service center environment and one non-IT related department is using it for call tracking. Additional units are expected to establish queues in OSU Helpdesk over the summer.

The Knowledgebase enhancements are complete and implementation is under way. The Scheduling module is being evaluated for use in a service center environment. Development of the Inventory module is just getting started.

Direct Costs, from January, 2003 through April, 2004, total \$38,538. This includes \$31,859 in programming costs, \$5,000 for hardware, \$604 for tape backups, and \$1,075 in travel and poster materials for presentations.

## 5. WHERE TO FIND MORE INFORMATION

The OSU Helpdesk website provides status reports, documentation and links to the source code. The website is located at <http://helpdesk.tss.oregonstate.edu>.

The source code is housed on Oregon State University's Open Source Lab website at <http://osuosl.org/helpdesk>. You'll also find installation instructions and an implementation discussion board.

User documentation is located on the I.S. Computer Consulting website at <http://tss.oregonstate.edu/consulting/>

## 6. ACKNOWLEDGMENTS

Our thanks to Mike Morgan and Josh Zojonc for finding the Open Source programs and making them all work together.

Thanks to all the students, staff and faculty whose valuable input has made OSU Helpdesk a better project.

And, finally, thanks to Curt Pederson, Vice Provost for Information Services, for embracing the vision and providing the funds to make it a reality.

## 7. REFERENCES

- [1] Technology Support Services Home Page  
<http://tss.oregonstate.edu>
- [2] I.S. Computer Consulting Home Page  
<http://tss.oregonstate.edu/consulting>
- [3] The Mozilla® Organization Home Page  
<http://www.The Mozilla Organization>
- [4] Bugzilla™ Home Page  
<http://www.bugzilla.org>
- [5] Northwest Regional Educational Laboratory, Portland, OR  
<http://www.netc.org/> & <http://www.nwrel.org/>
- [6] OSU Helpdesk Home Page  
<http://helpdesk.tss.oregonstate.edu>