



**PRESENT:** Marcia Middleton (APLM), Joe Makowiec (BRUN), Richard Naylor (COLN), Candy Wilson (RVLL), Mindy Fowler (SNLK), Joe Thornton (UHLS), G. Sacco (VOOR)

9:00 AM meeting called to order by Philip Ritter, Chair.

## I. MINUTES

Minutes of the April 28, 2009 meeting accepted as presented.

## II. EMAIL

R. Naylor asked J. Thornton how he was progressing in establishing the new email accounts that would use the domain name of the library, rather than the UHLS extension. J. Thornton is still working on this, and he is moving forward. He will soon send out an email asking for official support from all of the members for their email name change. Before this can happen, however, each library has to get their own domain name. The Automation Department will take care of that, and UHLS is paying for each library, who hasn't already done so, to license their domain name.

## III. ASC MEETINGS

Due to the ongoing discussion regarding the number of ASC meetings per year, P. Ritter included a copy of the UHLAN Contract APPENDIX I "Operation Guidelines/Rules for Automated System Governance" in the handout. In this document, it states that the ASC will meet at least 10 times per year. Since this is part of the 3-year UHLAN Contract, the number of meetings cannot be changed without, at least, UHLS Board approval. P. Ritter will look into the legality and the mechanics of changing this statement and will report back to the ASC.

**MOTION:** G. Sacco moved to ask P. Ritter to ask the UHLS Board if it would be possible to amend the 4<sup>th</sup> paragraph in the UHLAN Contract APPENDIX I to read: "MEETINGS: The Committee will meet at least six times per year." R. Naylor seconded.  
Discussion.

M. Middleton noted that there were not a lot of libraries represented at the meeting and that more libraries need to contribute to this decision - this would alleviate any criticism regarding decisions being made by a small group of libraries.

G. Sacco responded that the attendance at meetings has continued to decline, and people have been generally unresponsive.

R. Naylor noted that since this does not deal with finances he didn't see any reason why it was necessary to wait for larger attendance. The libraries in attendance constituted the Committee at the time.

<R. Naylor exited the meeting>

**MOTION:** C. Wilson moved to table this motion until the July 17<sup>th</sup> meeting when it could be added to the Agenda for formal discussion. M. Middleton seconded. Unanimous.

#### IV. OTHER BUSINESS

G. Sacco noted that she would like to see a calendar structure for the ASC meetings with specialized topics for each session such as conferencing, communications, inventory, etc. She noted that since this is a policy-making group, this type of informational meeting would only need to take place at one or two meetings a year. Additionally, she would like to see a policy assessment compared to current trends. J. Thornton noted that if there was anything in which someone was especially interested, all they had to do was request it as an agenda item and he would be happy to provide the information.

G. Sacco asked what J. Thornton considered his three main priorities for the next three months. J. Thornton responded that his monthly report lists what his Department is working on, and is projected to work on. He does not work on a structured priority system - all of the projects listed in his report are important. In addition, all of the more detailed explanations for the Automation Department work is written in his blog, and the UHLS wiki includes even more information. He pointed out that he developed the blog in direct response to her request for more detailed information regarding automation projects. The blog and wiki are both readily accessible via RSS feeds that would notify people that new information had been added to either one:

The blog: <http://uhls.org/autosvcs/blog/>

The wiki: [http://www.uhls.org/wiki/index.php?title=Main\\_Page](http://www.uhls.org/wiki/index.php?title=Main_Page)  
(Password: 28essex)

G. Sacco asked about policies. J. Thornton noted that on the wiki, the information is divided into specific categories. These categories are each very complex and the policies regarding procedures are embedded in the categories presented. There is a lot of information in the wiki, and J. Thornton will periodically send out an email reminder that the wiki is available.

Discussion about the UHLS website and its usefulness. J. Thornton again pointed out that any behind-the-scenes, technical information could be found on his blog and he also noted that UHLS will continue to serve its users - member libraries and the public - to the best of its ability.

<G. Sacco exited the meeting>

M. Middleton noted that the ASC meetings are a business meeting, not a continuing education forum, and that she was not anxious to see any change in the format. P. Ritter noted that the format of the meeting had been fine-tuned in response to Committee members who wanted J. Thornton's report in advance of the meeting so that they could discuss it with their staff and then propose Agenda items.

**MOTION:** M. Middleton moved to adjourn the meeting. J. Makowiec seconded. Unanimous. Meeting adjourned at 9:45 AM.

Heidi A. Fuge  
5/26/09

## Automation Services Report May 26, 2009

### Email domains

Automation Services met to discuss, among other things, the proposal I made to ASC at our last meeting to offer customized email domain names to the libraries, e.g. *www.rensselaervillelibrary.org*, while continuing to host all email on the UHLS mail server. Some issues:

- Jonathan will test moving files from one domain (uhls.lib.ny.us) to another.
- The libraries will have to send us lists of all users who should be moved to the new domains.
- If users wish to keep their UHLS domain accounts, they may not have an account in another domain. We don't have enough licenses, and the administration of lists and other mail functions would get too complicated if users were allowed to maintain multiple accounts. The exception would be for staff members who work in more than one library. They could have an account for each library they work in, but they would be responsible for managing their own lists.
- Libraries will need to register new domain names if they don't have them already. UHLS will manage and pay for this part of the project.
- We'll send details to the libraries when we're done testing and are confident we can offer this service with no disruption of normal email service.

Related: We renewed our *iMail* license with Ipswitch. Unlike the past few years, their initial renewal quote was reasonable so we didn't have to threaten to cancel in order to lower the price.

### System slowness

Complaints (all valid) rose at the end of April and beginning of May. The steps we took to address the problem this time are described on the Automation Services blog (<http://uhls.org/autosvcs/blog/>) and also in the attached document: *System\_slowness.doc*.

Also, we discussed in our department, with SirsiDynix, and with friends at RPI the possibility of borrowing a server to test the hypothesis that disk access is a major contributor to the slowness problem. This would not be a simple test to conduct, and may not be feasible at all, but we'll try anything possible to solve this ongoing problem.

### KidSearch

The latest (not the greatest) news on the post-upgrade problem with limits in the HIP:

I heard back from Belinda Gambrino at SirsiDynix. As I understand it the situation is this: Using APLM as an example, our *KidSearch* implementation uses a default limit of *location=APLM* and *collection=col\_kids*. These limits are applied to all searches. After getting a search result, if you try to limit by 'Picture Books' nothing will happen because 'Picture Books' is a collection, *collection* is already one of the limits that's been applied, and the HIP won't override the original *collection* limit (*col\_kids*) with the new one (Picture Books).

Many SirsiDynix customers and staff (Belinda at least) are unhappy with this situation, and it should be corrected with the next upgrade.

The next upgrade will be to HIP 3.20 (we're on 3.10), which requires Horizon 7.5 (we're on 7.4.2), which requires Sybase 15 (we're on 12.5). So it will not be a trivial upgrade, but we'll do it as soon as it's released and stable.

## Databases

We finally enabled EGRN access to the new *NOVEL* databases: *ProQuest Platinum* and *Grolier Online*.

## Networking support

Rawdon continued his invaluable on-site networking assistance at the libraries. A sample:

- Fixed NGRN receipt printer printing and network print server.
- APL - troubleshoot Fortres, SAM, PWB strange behavior - still have no idea what causes Fortres to stop working.
- Deployed router at CAST, restaged public PCs, transferred old director PC to new one which allows remote access (for Darlene). Many of their public PCs need to be taken care. Probably do not need to be restaged.
- Conferred with COLN, BETH about their T1. Both of them will drop the T1 later this year.
- Ordered TLM (Time Limit Manager) for RVLL, will check their old public PCs see if it still fits their needs.
- Meeting at BETH about moving off T1 and purchase of a firewall. They expect to cut over in the summer.
- Meeting at POES about weak wireless signal. Looking into additional hardware to boost the signal out to the parking lot.
- CAST - finished redeploying all their public PCs and the Cisco router.
- Reviewed ALTM, BRUN new building layout and future wireless service requirements.
- Finished library PC inventory worksheet.
- Staging RVLL public PCs.
- Tested print server for NGRN, cannot duplicate problem - it can print only one page at a time.
- Set up VPN tunnel on our firewall. Able to get in but cannot get to DMZ. Will contact Cisco for help.

## APL branches

Joe met with a group at APLM to discuss the reopening of the APLD, APLH, and APLP branches, and the renaming of APLN to APLB.

## Statistics

Because some of these reports are long, I'll just give the links to the *statistics* pages on our blog.

WebFeat: [http://uhls.org/autosvcs/blog/?page\\_id=398](http://uhls.org/autosvcs/blog/?page_id=398)  
(includes April, 2009 and the total since 1/1/2008)

AquaBrowser: [http://uhls.org/autosvcs/blog/?page\\_id=388](http://uhls.org/autosvcs/blog/?page_id=388)

CatExpress: [http://uhls.org/autosvcs/blog/?page\\_id=8](http://uhls.org/autosvcs/blog/?page_id=8)

Notices: [http://uhls.org/autosvcs/blog/?page\\_id=7](http://uhls.org/autosvcs/blog/?page_id=7)

In addition, we've sent 10,286 'hold expiring' email notices since 1/1/09, and 34,954 pre-overdue courtesy email notices since 3/2/09 (as of 5/18/09).

## Miscellaneous.

- We wrote several reports showing EGRN holdings in specified Dewey ranges.
- We added Z39.50 targets to the Horizon client and troubleshot some problematic ones.

## System slowness (from the AutoSvcs blog: <http://uhls.org/autosvcs/blog/>)

Over the past few weeks we've had increasing, legitimate complaints of system slowness. I posted to the Horizon-L list asking for help and got some, the most useful coming from a UNIX sysadmin. He recommended three tools:

```
iostat -xn 5
iostat -c 5
vmstat -S 5
```

... which measure disk, memory, and CPU usage in different ways. The results started me down a path that led to a graphical Sybase monitoring tool called 'Spotlight' — which I installed (trial version) and will probably purchase if the price is right.

I also remembered a tool from my sysadmin days called 'truss.'

The combined output of these tools seems to point to disk usage as our major bottleneck, although I need an expert to verify that for me. And if it's verified, what then?

I opened a ticket with SirsiDynix on 4/28 and have posted several comments to it as I learn more from these tools. So far no one at SirsiDynix has responded. Today during a slow period, truss reported:

```
bash-2.05# truss -c -p 315
^Csignals -----
SIGALRM          1096
SIGUSR2           69
total:           1165
```

```
syscall          seconds    calls    errors
close             .004      34
getpid            .000      34
kill              .016     289
```

```

ioctl          .000      34
fcntl          .000      34
lwp_unpark    .000      69
poll          14.500  781459    15
sigprocmask   .032     1506
setcontext    .001      69
sigtimedwait  .073     1096
lwp_mutex_wakeup .004     170
lwp_mutex_lock .007     196
lwp_cond_wait .050     1271
lwp_cond_signal .041     1271
pread         .149     667
pwrite        .059     604
kaio          .737    52116   52116
kaio          .000      4
accept        .011      68     34
recv         .104    4183
send         .365    8327     5
setsockopt    .001      34
-----
sys totals:   16.164  853535  52170
usr time:     39.289
elapsed:     109.660

```

Those kaio errors led me to a page on *Google Book Search* that had this possibly useful section:

Pagecleaners (Database Writers in Oracle terms) typically use asynchronous I/O to fire off multiple writes at one time. This approach is more efficient than waiting individually for each write to complete before initiating the next. Synchronous I/O concurrency can be improved if multiple pagecleaners are used simultaneously, but asynchronous I/O is the more efficient solution.

Asynchronous I/O is implemented with the `libaio.so` user library. Since the original implementation depends on user threads, an asynchronous I/O call involves multiple switches between kernel and user mode. To improve the efficiency of asynchronous I/O, a special kernel module, `/kernel/sys/kaio`, handles asynchronous I/O entirely in kernel mode. This feature, known as Kernel Asynchronous I/O (KAIO), was introduced in Solaris 2.4. KAIO requires no software changes by developers—it is invoked transparently on behalf of the calling program.

When asynchronous I/O is carried out, the library attempts to use KAIO to process it. If the database file is implemented on a raw device of some kind (such as a raw disk partition or raw volumes from a volume manager), the I/O will be carried out with KAIO. If the database files reside on file systems, the KAIO attempt will fail (with an `ENOTSUP` error) and the library will instead create a user thread to complete the I/O.

KAIO delivers performance improvements for database files on raw devices by reducing the length of the code path required to complete an asynchronous I/O. The availability of KAIO is one of many reasons why raw devices are a more efficient choice for database files than are file systems.

So I followed up with SirsiDynix, asking if we can switch to raw devices (we use ufs files — UNIX file system), or if we want to if we can. I'm waiting to hear from them.