The New Normal?
Library Services in the Post COVID-19 Era

Highlight of services and challenges in an unusual year of 2020

Kevin Hau
Belinda Kwok
Service Arrangements in 2020

- Special opening hours/WFH/external members restriction
- “Call-for-service” at Circulation and Reference Counters
- Zoom with a Librarian
- Restricted seats in Booking System
- More UV Book Sterilizers
- Limited HKALL and ILL services
- Scan school textbooks (lic. by HKRRLS) for ECE students teaching/block practice
- EI Marketplace
- Future Classroom project proceed as schedule
- Place all books in Pickup locker
- Make use of Library Apps
1. Pickup Locker (Pickup Station)
2. Mobile Apps (EdU Library, EdU LibMAP)
3. Issues and Challenges
• Storage Locker (Octopus)
• Pickup Locker (SIP2)
VIDEO (0:35)
• Pickup Locker

Standard Interchange Protocol version 2 (SIP2)

- Place Item to Self-Pickup Station
- Notify User
- Collect Book
Workflow of placing item to Pickup Station

- Received hold items
- Filtering
  - by size
  - by collection
  - by physical condition

To Self-Pickup Station

Prepare the following before placing items:
- Any accompanying materials?
- Pick up periods?
- Upload "Active hold shelf request list" to the Station

Place Item to Self-Pickup Station

To physical hold shelves
### Usage

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>% of items placed into the Station out of the total hold request items</th>
<th>% of items successfully loaned out via the Station (out of total items placed in the Station)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMW</td>
<td>67%</td>
<td></td>
<td>78%</td>
</tr>
<tr>
<td>TKO</td>
<td>61%</td>
<td></td>
<td>55%</td>
</tr>
<tr>
<td>MMW+TKO</td>
<td>66%</td>
<td></td>
<td>74%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>% of items placed into the Station out of the total hold request items</th>
<th>% of items successfully loaned out via the Station (out of total items placed in the Station)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMW</td>
<td>68%</td>
<td></td>
<td>69%</td>
</tr>
<tr>
<td>TKO</td>
<td>72%</td>
<td></td>
<td>69%</td>
</tr>
<tr>
<td>MMW+TKO</td>
<td>69%</td>
<td></td>
<td>69%</td>
</tr>
</tbody>
</table>
Standard Interchange Protocol version 2 (SIP2)*

**SIP2 64**

### Patron Information Response

The ACS must send this message in response to the Patron Information message.

- **patron status**<language><transaction date><hold items count><overdue items count><fine items count><recall items count><unreadable holds count><patron identifier><personal name><hold items limit><overdue items limit><charged items limit><recall items count><valid patron password><currency type><fee amount><fee limit><home address><home phone number><screen message><print line>

<table>
<thead>
<tr>
<th>Field</th>
<th>ID</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>patron status</td>
<td>14-char</td>
<td>fixed-length required</td>
</tr>
<tr>
<td>language</td>
<td>3-char</td>
<td>fixed-length required</td>
</tr>
<tr>
<td>transaction</td>
<td>18-char</td>
<td>fixed-length required</td>
</tr>
<tr>
<td>date</td>
<td>YYYYMMDD</td>
<td>ZZZZHHMMSS</td>
</tr>
<tr>
<td>hold items</td>
<td>4-char</td>
<td>fixed-length required</td>
</tr>
<tr>
<td>overdue items</td>
<td>4-char</td>
<td>fixed-length required</td>
</tr>
<tr>
<td>charged items</td>
<td>4-char</td>
<td>fixed-length required</td>
</tr>
<tr>
<td>recall items</td>
<td>4-char</td>
<td>fixed-length required</td>
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<tr>
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<td>4-char</td>
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<tr>
<td>holds count</td>
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<tr>
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<td>AO</td>
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<tr>
<td>identifier</td>
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<td>fixed-length optional</td>
</tr>
<tr>
<td>charged items</td>
<td>4-char</td>
<td>fixed-length optional</td>
</tr>
<tr>
<td>recall items</td>
<td>4-char</td>
<td>fixed-length optional</td>
</tr>
<tr>
<td>hold items</td>
<td>4-char</td>
<td>fixed-length optional</td>
</tr>
</tbody>
</table>

* Source: 3M™ Standard Interchange Protocol
(Document Revision 2.12, Updated April 11, 2006)
Standard Interchange Protocol version 2 (SIP2)

**SIP2 64/63/23/17**

TCP Socket programming, platform-independent implementation (e.g., Java, PHP)

```
function sip2patron($a,$b,$c){
    header("content-type:text/html;charset=utf-8");
    $socket = socket_create(AF_INET,SOCK_STREAM,SOL_TCP);
    socket_set_option($socket, SOL_SOCKET, SO_RCVTIMEO, array("sec" => 1, "usec" => 0));
    socket_set_option($socket, SOL_SOCKET, SO_SNDTIMEO, array("sec" => 5, "usec" => 0));
    if(socket_connect($socket,'175.159.xxx.xx',5008) == false){
        echo 'connect fail message:'.socket_strerror(socket_last_error());
    }else{
        $mess= "AO3410|AA\.$a."|AC|AD|BP|BQ\r\n";
        if(socket_write($socket,$mess,strlen($mess)) == false){
            echo 'fail to write'.socket_strerror(socket_last_error());
        }else{
            return $callback;
        }
    }
    socket_close($socket);  }
```
Alma Secured SIP Communication

- The SelfCheck station is identified by its certificate
- Self signed SSL certificate
- Alma creates/renews the client certificate with a simple UI and stunnel installation procedure

Ex-Libris Developer Network: https://developers.exlibrisgroup.com/alma/integrations/selfcheck/
1. Pickup Locker (Pickup Station)

2. Mobile Apps (EdU Library, EdU LibMAP)

3. Issues and Challenges
• **EdU Library** (≈100% Library-made)
• **EdU LibMAP** (70% Outsourced)
• EdU Library

(Developer Network)

APIs
• Alma Users and Fulfillment (Users and Loans)
• Alma Configuration and Administration (Reminders)
• Primo Search
Future Enhancements can include:
- Booking sessions check-in using NFC tags
- Personalized features

Primo Search API
NGINX Thumbnail Caching feature
Alma Users and Fulfillment API
Google FCM
• EdU LibMAP
• EdU LibMAP
1. Pickup Locker (Pickup Station)

2. Mobile Apps (EdU Library, EdU LibMAP)

3. Issues and Challenges
(Pickup locker)
• Single source of supplier
• Maintenance via remote desktop connection; AnyDesk, TeamViewer, ...

(LibMAP)
• Outsource, strictly limited on customization
• Maintenance or charge items?

(Staff and Supplier)
• More communication, commitment, ...
• Only using mobile app to talk
Contact Us
bkwok@eduhk.hk (Circulation)
hork@eduhk.hk (Systems)