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Synergies of technology and technique: A batch search process trial for copy cataloguing Japanese donation monographs as an outcome of "multiple-employment"

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Abstract

Through her "multiple-employment" experience in the Asian Studies Research Collection (ASRC) and in Electronic Resources Cataloguing (E-cat) at Monash University Library, the author devised a technology-driven batch process procedure that could significantly enhance copy cataloguing efficiencies. In the E-cat team, a range of batch processing software tools are available for cataloguing electronic books (ebooks). However, these tools had been used exclusively for ebooks. The author has recently developed a new procedure for copy cataloguing print books by modifying the procedure that the E-cat team practices. The applicability of this new procedure to the traditional copy cataloguing processes at ASRC has been analysed. As a result, the processing time for cataloguing at ASRC is found to be reduced by up to 70 %. The main aim of this paper is to describe the details of the procedures involved in the application of the software tools "OCLC Connexion client" and Terry Reese's "MarcEdit" to traditional print copy cataloguing at university libraries.

Introduction

Fast evolving information technology (IT) offers us useful tools to make our tasks at libraries more creative and efficient. Enhancing knowledge and skills in using these tools changes "how we do things" and affects our experience at work as well as the productivity of the organisation. I have learned this through my "multiple-employment" experience in the Asian Studies Research Collection (ASRC) and Electronic Resources Cataloguing (E-cat) at Monash University Library. The latter has benefitted from the latest IT developments in the cataloguing process while the former remains rather traditional in its processes. This contrast has made me realize that there is some room for improvement in the copy cataloguing process at ASRC by introducing the latest information technology.

The efficiency and accuracy of copy cataloguing can often be improved dramatically by replacing manual activities with automated solutions. The E-cat team at Monash University has been using a range of batch process tools to provide users with access to ebooks and other electronic resources in a timely manner. For example, over 23,000 titles were catalogued in one month in June 2008 (EResources NEWS 2008). The software tools used in E-cat include OCLC Connexion client, MarcEdit, Microsoft Access, Excel, MARCTOOL, which was developed and used exclusively at Monash University, and other utility software developed by Gary Strawn for use with the Ex Libris Voyager library system. The application of software tools in a library environment has been reported by Sanchez et al. (2006). They reported on batch processes for the correction and improvement of ebook records which can be made with MarcEdit, MSWord and Excel. These automation methods were utilized at Alkek Library, Texas State University for record maintenance and quality control for ebooks. Kentucky State University Libraries (2008) shows use of MarcEdit to edit large numbers of bib records on their website. In addition to my experience in using the batch process tools at E-cat, the strategies described by Sanchez et al. inspired me to investigate whether or not this automation approach could also be applied successfully to the cataloguing of print books at ASRC. With support from the E-cat team members and the ASRC librarians, I conducted a trial of 150 Japanese print book titles by tailoring the batch process procedures of the E-cat team to meet the unique needs of Japanese books. The software tools used in this work include OCLC Connexion client and MarcEdit. The result of this trial is remarkable. The cataloguing process speed appears to be fourfold with reduced human errors. The aim of this paper is to report the batch process automation solutions used for copy cataloguing print books at Monash University Library.

1. Background of the trial - cataloguing back log in Japanese Collection and its problems

The cataloguing backlog is an ongoing problem in the Japanese Collection in ASRC. There were more than 3,000 titles of donated books backlogged in August 2008. Two main problems caused by this backlog are as follows: (1) the library users don't have access to these books due to the lack of catalogue information and (2) unnecessary purchase requisitions are often placed for some of the copies which have already been acquired by the library. Thus, an enhancement of copy cataloguing efficiencies was required. However, unlike the modern batch processing, the cataloguing process at

ASRC was performed by individual searching through the Z39.50 utility and manually editing of records. Hence, batch processing procedures were developed based on the software tools for copy cataloguing of Japanese books in order to accelerate the process.

2. Aim and methods of the trial

The primary aim of this trial was to investigate the efficiency of the newly developed procedure. The complete batch process used in this trial can be divided into three stages: searching the records in OCLC bibliographic database (Job-1), editing the records in MarcEdit (Job-2) and importing the records into Voyager catalogue database (Job-3). The tasks involved in these three major jobs are summarised as follows:

Job-1. Batch searching records in the OCLC bibliographic database
- Task-1. Creating a text file (ISBN list)
- Task-2. Conducting a batch search in OCLC Connexion client
- Task-3. Selecting records from the search results
- Task-4. Exporting the records to a local file

Job-2. Batch editing the records in MarcEdit
- Task-5. Identify the fields that need editing
- Task-6. Batch editing marc fields
- Task-7. Compiling the file into marc format

Job-3. Individual importing of the records into the university's catalogue database (Voyager)
- Task-8. Importing bibliographic records into Voyager catalogue database
- Task-9. Editing them individually as required
- Task-10. Adding holding and item records to the bibliographic records.

In order to evaluate the efficiency of the batch process, the lead time of each task was measured in this trial and compared with average lead time of manual process.

Further, to examine the correlation between the number of books processed and their efficiency, the lead time for batch processing 50 book titles was measured and compared with batch processing of 100 book titles.

3. Trial of the new procedure

The trial of the new procedure was conducted in August 2008 following the above method. Details of the tasks for the three jobs are described below.

3-1. Batch searching records in the OCLC bibliographic database (Job-1.)

The first task of this job is to create a text file which contains the ISBNs of books to be catalogued. A barcode scanner was used to acquire the ISBNs instead of typing them in the traditional procedure at ASRC. The acquired ISBNs were saved in a text format. Figure 1 shows the view of a text editor where the acquired ISBNs of the donation books are listed.

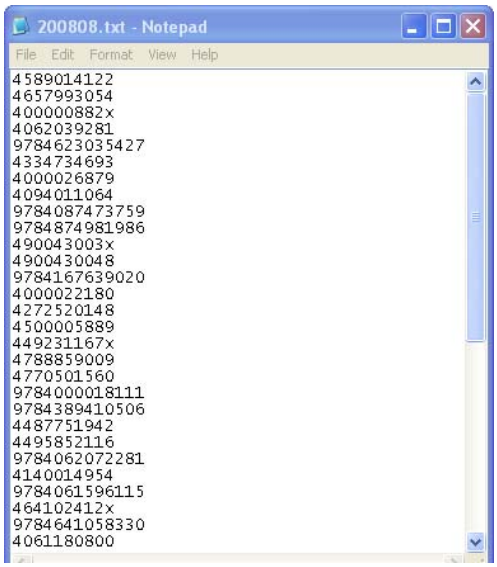


Figure 1 The view of a text editor showing ISBNs of donation books.

Figure 2 shows the second task, i.e. the batch search process in OCLC Connexion client. This window pops up when the online search function of OCLC Connexion client is activated. The window indicates the status of the batch search. The final search result is shown in Fig. 3. The title list of retrieved records is seen in this figure.

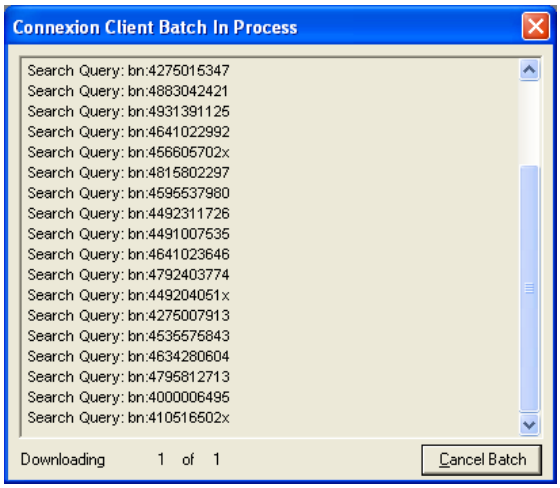


Figure 2 The batch searching window of the OCLC Connexion client, indicating the status of the search process.

The third task is to select records from the search result list in Fig. 3. This step is required for selecting the relevant and best quality records. When a row on the list is chosen by double-clicking, a new window containing the corresponding bibliographic record opens (Fig. 4). This window allows the user to examine the records and select the most appropriate records for exporting.

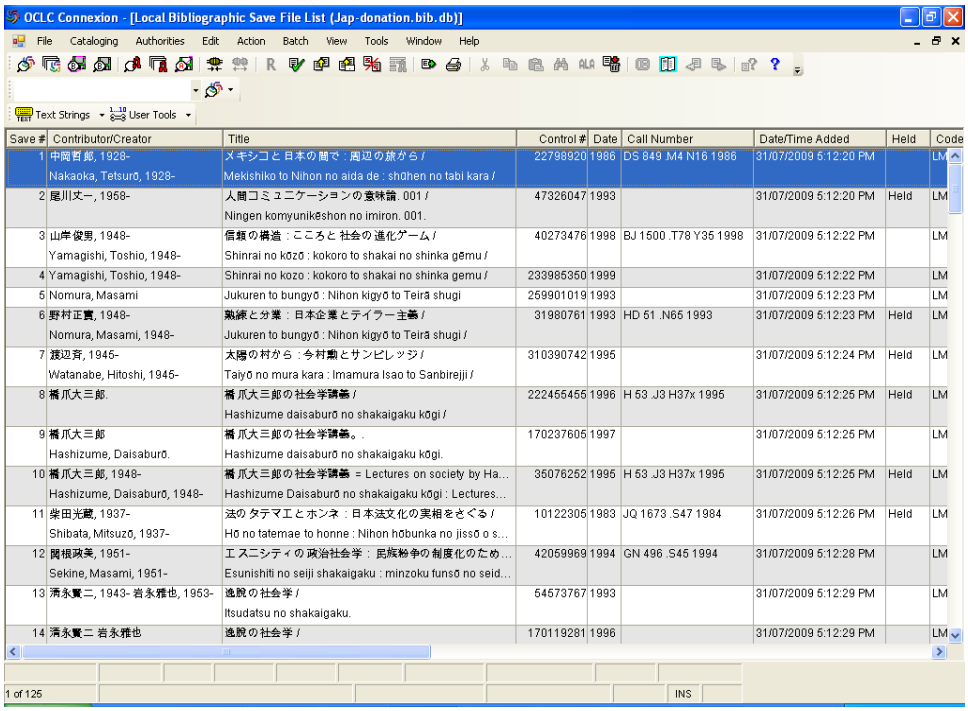


Figure 3 The result list from the batch search on OCLC Connexion client.

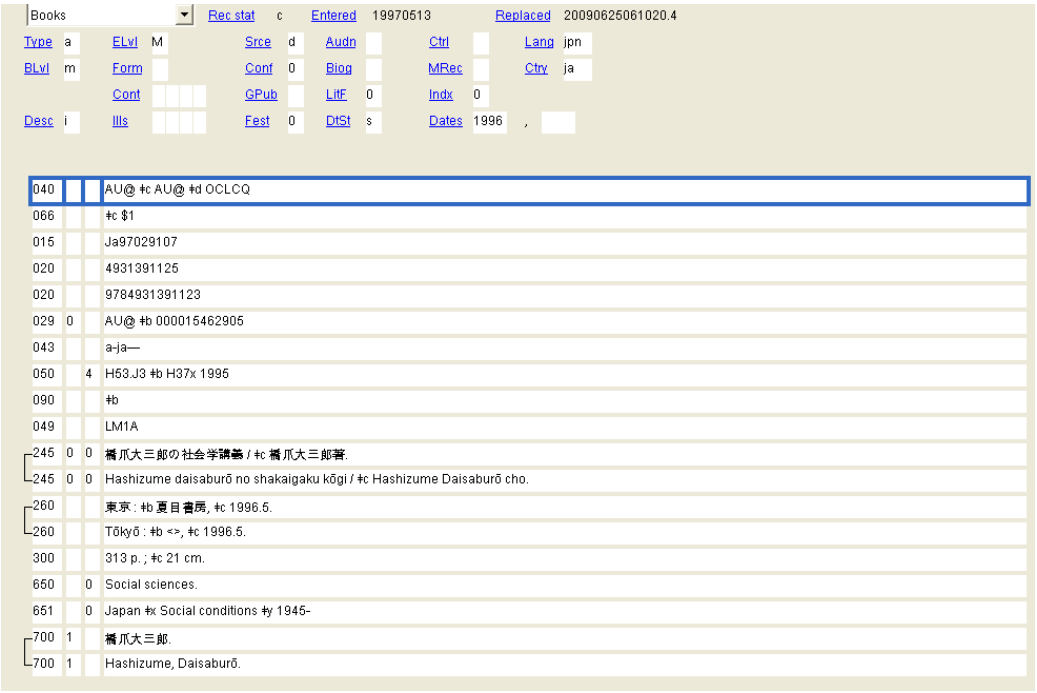


Figure 4 An example of the bibliographic record.

The next step after completing selection of the records on the result list is to export the records (the fourth task). Figure 5 shows the window on OCLC Connexion client for batch exporting the selected records to a local file. The software option allows the operator to set the fields to be excluded before the records are exported. Thus, the unwanted fields will automatically be eliminated from the records (Figure 6).

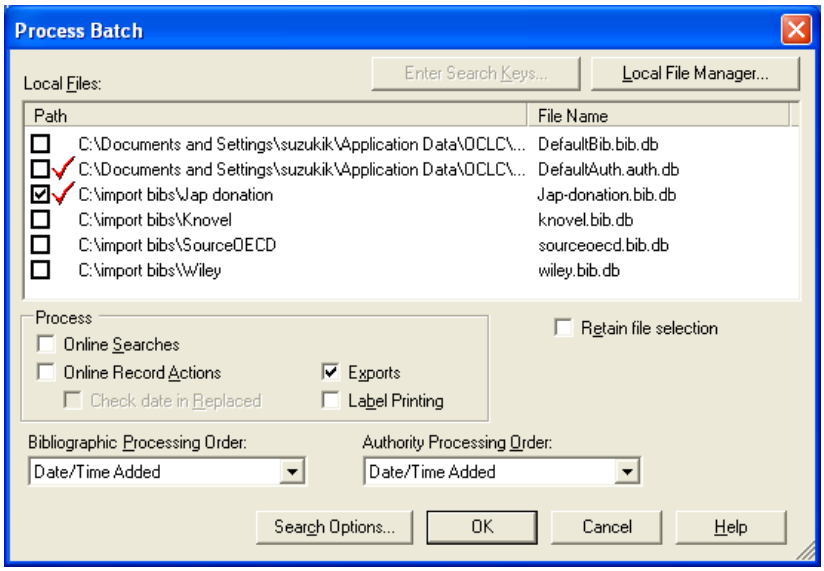


Figure 5 The window on OCLC Connexion client for batch exporting.

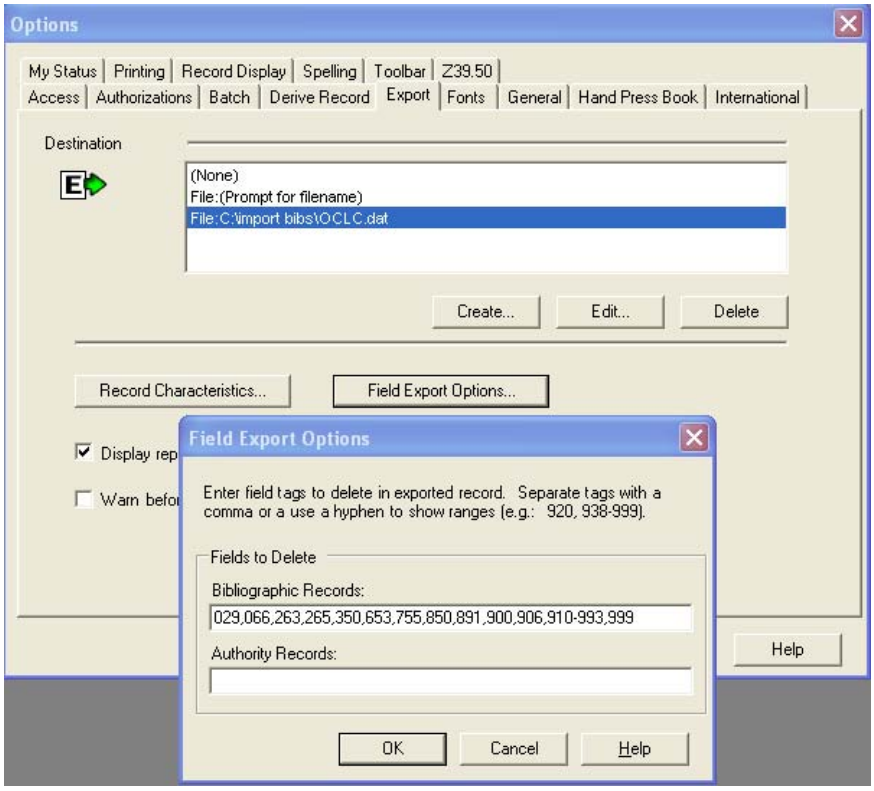
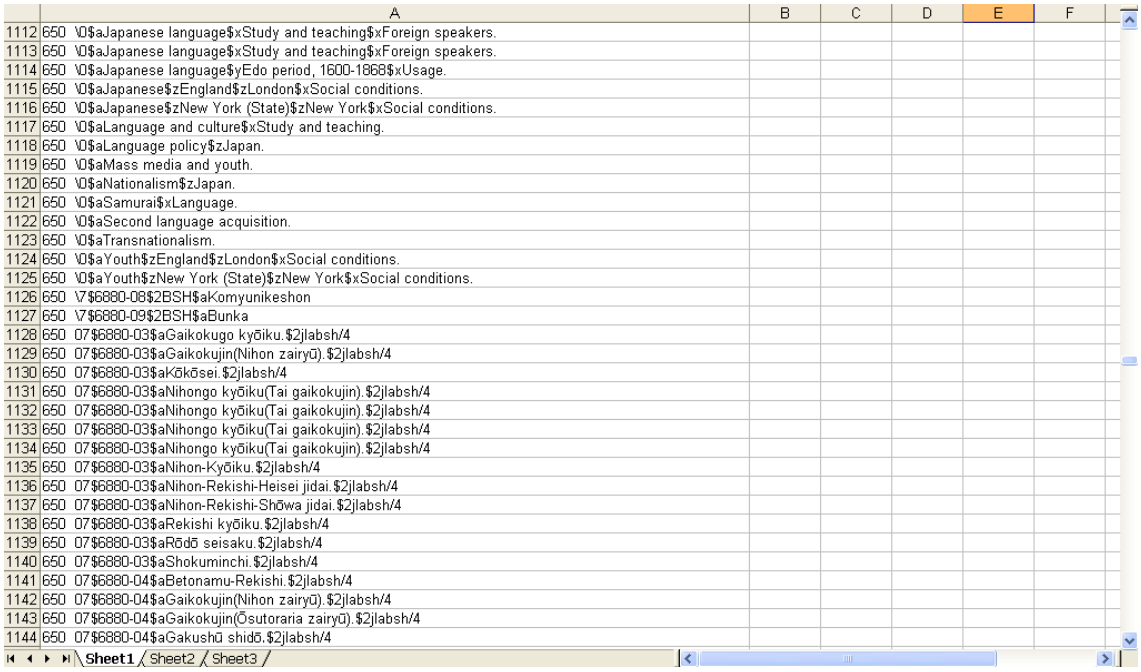


Figure 6 Field Export Options screen for setting up the fields to be deleted.

3-2. Batch editing the records in MarcEdit (Job-2)

The first task (Task 5) of this job is to identify the fields that need editing. This task was done by analysing field data in Microsoft Excel. First, all records in MarcEdit were copied and pasted into an Excel worksheet. Second, the data was sorted in ascending order (Figure 7). By looking through the list, fields that need editing were identified. Table 1 shows the fields identified and how they were edited by utility tools in MarcEdit (Task 6).



	A	B	C	D	E	F
1112	650 \0$aJapanese language$xStudy and teaching$xForeign speakers.					
1113	650 \0$aJapanese language$xStudy and teaching$xForeign speakers.					
1114	650 \0$aJapanese language$yEdo period, 1600-1868$xUsage.					
1115	650 \0$aJapanese$zEngland$zLondon$xSocial conditions.					
1116	650 \0$aJapanese$zNew York (State)$zNew York$xSocial conditions.					
1117	650 \0$aLanguage and culture$xStudy and teaching.					
1118	650 \0$aLanguage policy$zJapan.					
1119	650 \0$aMass media and youth.					
1120	650 \0$aNationalism$zJapan.					
1121	650 \0$aSamurai$xLanguage.					
1122	650 \0$aSecond language acquisition.					
1123	650 \0$aTransnationalism.					
1124	650 \0$aYouth$zEngland$zLondon$xSocial conditions.					
1125	650 \0$aYouth$zNew York (State)$zNew York$xSocial conditions.					
1126	650 \7$6880-08$2BSH$aKomyunikeshon					
1127	650 \7$6880-09$2BSH$aBunka					
1128	650 07$6880-03$aGaikokugo kyōiku.$2jlabsh/4					
1129	650 07$6880-03$aGaikokujin(Nihon zairyū).$2jlabsh/4					
1130	650 07$6880-03$aKōkōsei.$2jlabsh/4					
1131	650 07$6880-03$aNihongo kyōiku(Tai gaikokujin).$2jlabsh/4					
1132	650 07$6880-03$aNihongo kyōiku(Tai gaikokujin).$2jlabsh/4					
1133	650 07$6880-03$aNihongo kyōiku(Tai gaikokujin).$2jlabsh/4					
1134	650 07$6880-03$aNihongo kyōiku(Tai gaikokujin).$2jlabsh/4					
1135	650 07$6880-03$aNihon-Kyōiku.$2jlabsh/4					
1136	650 07$6880-03$aNihon-Rekishi-Heisei jidai.$2jlabsh/4					
1137	650 07$6880-03$aNihon-Rekishi-Shōwa jidai.$2jlabsh/4					
1138	650 07$6880-03$aRekishi kyōiku.$2jlabsh/4					
1139	650 07$6880-03$aRōdō seisaku.$2jlabsh/4					
1140	650 07$6880-03$aShokuminchi.$2jlabsh/4					
1141	650 07$6880-04$aBetonamu-Rekishi.$2jlabsh/4					
1142	650 07$6880-04$aGaikokujin(Nihon zairyū).$2jlabsh/4					
1143	650 07$6880-04$aGaikokujin(Ōsutoraria zairyū).$2jlabsh/4					
1144	650 07$6880-04$aGakushū shidō.$2jlabsh/4					

Sheet1 / Sheet2 / Sheet3 /

Figure 7 Records copied into a Microsoft Excel worksheet

Table 1 MarcEdit tools and fields to be edited.

Field edited	Action taken	Tool used
650/880	Delete field if second indicator is “7”	Delete Field Utility
440	Replace with valid authority series name heading	Edit Subfield Data Utility
984	Add field	Add Field Utility
All	Replace full stop [。] with [.]	Replace
All	Sort fields	Sort

The last task (Task 7) in the job is compiling the edited file into MARC format so that the records in the file can be imported into the library catalogue database. Figure 8 shows the tool to do this task automatically.

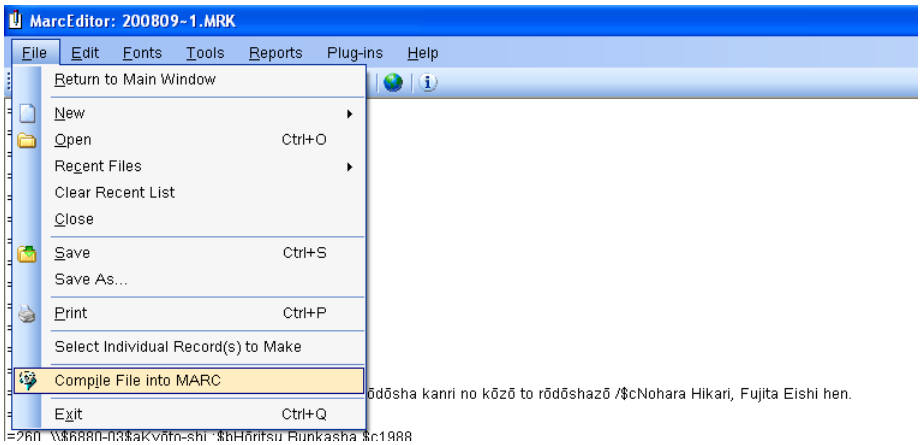


Figure 8 MarcEdit tool to compile the file into MARC format.

3-3. Individual import of the records into the university's catalogue database (Job-3)

The final job (Job-3) of the trial is importing the records in to the university library management system Ex Libris Voyager catalogue. This job is done by manually saving the bibliographic records, adding new holding records and item records. Figure 9 shows an example of the bibliographic record which is imported into the university library catalogue database.

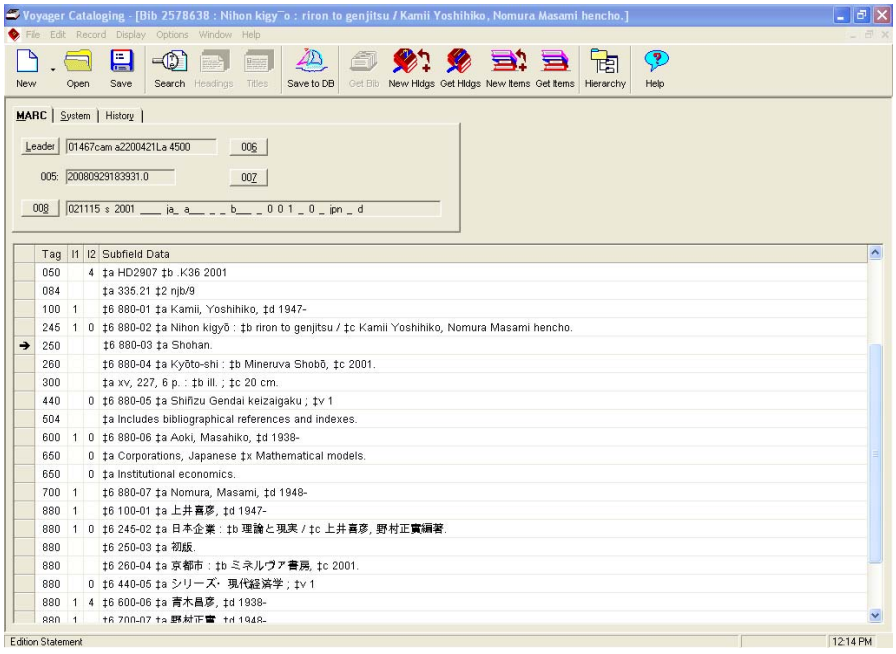


Figure 9 An example of the bibliographic record imported into the university library catalogue.

4. Results

In this section the results of lead time measurements for copy cataloguing 50 and 100 book titles are given. The lead times obtained are tabulated for both the newly developed batch process as well as the traditional manual process. Table 2 and 3 show the results for processing 50 titles. The results for processing the larger title number of 100 are shown in Tables 4 and 5.

Table 2 Batch process of 50 titles.

Job	Task	Time	Lead time
1. Search records (OCLC Connexion client)	Create a text file (ISBN list)	6 min	89 minutes (1.5 hours)
	Conduct OCLC batch searching	3 min	
	Select records from the search results	7 min	
	Export the OCLC records to a local file	<1 min	
	Manual search title individually and import into the library catalogue database (this was done for one title as the record for the title was not found in the OCLC database searching by ISBN)	9 min	
2. Edit records (MarcEdit)	Identify the fields that need editing	2 min	
	Batch edit records	3 min	
	Compile the file into marc format	<1 min	
3. Import records (Voyager)	Import bib individually, edit them as necessary, add holding and Item records	59 min	

Table 3 Manual process of 50 titles

Job	Task	Time	Lead time
Search, edit, and import records	Search, select, import, sort and edit records, and add holding & item records	3-8 min/ record	5 hours

Table 4 Batch process of 100 titles

Job	Task	Time	Lead time
1. Search records (OCLC Connexion client)	Create text file (ISBN list)	10 min	155 minutes (2.5 hours)
	Conduct OCLC batch searching	4 min	
	Select records from the search results	17 min	
	Export the OCLC records to a local file	<1 min	
	Manual search title individually and import into the library catalogue database (this was done for one title as the records for it was not found in the OCLC database searching by ISBN)	12 min	
2. Edit records (MarcEdit)	Identify the fields that need editing	2 min	
	Batch edit records	3 min	
	Compile the file into marc format	<1 min	
3. Import records (Voyager)	Import bib individually, edit them as necessary, add holding and Item records	107 min	

Table 5 Manual process of 100 titles

Job	Task	Time	Lead time
Search, edit, and import records	Search, select, import, sort and edit records, and add holding & item records	3-8 min /record	10 hours

5. Findings and recommendations

The following key findings and recommendations have been found as a result of this trial.

1. A batch process using the OCLC Connexion client and MarcEdit can also be applied to the copy cataloguing of print books. It has proven to be more efficient than the traditional individual process.
2. A batch process is highly efficient for copy cataloguing of donation books which

contain ISBNs; the cataloguing process time is accelerated up to 4 times by using the batch process.

3. Processing 100 books is more efficient than 50 books. It is predicted that the more titles are processed by the batch procedure, the more efficiency will be gained.
4. The longest lead time in this process is due to Job-3 (importing bib record). This is the only job that was done totally manually. The overall process time could be shortened further if an automation procedure such as bulk loading was utilized for this job.

Conclusion

In this paper, I described the procedure and outcomes of a batch process trial for copy cataloguing Japanese donation monographs. A total of 150 titles from a recently acquired donation of Japanese books were processed by using OCLC Connexion client and MarcEdit. It has been demonstrated in this trial that the batch process is highly efficient and the processing time is reduced by up to 70 % as compared with the conventional manual process. Since this successful trial, all the books that have ISBNs among the cataloguing backlog in the Japanese Collection at the Asian Studies Research Collection (ASRC) have been batch-processed and thousands of records are now in the library catalogue. Owing to the demonstrated effectiveness of the developed procedure in reducing cataloguing backlogs, further trials are currently ongoing within ASRC to examine the applicability of a similar batch procedure for upgrading brief records to full records.

In addition, synergies of technology and technique as an outcome of my "multiple-employment" were confirmed through the trial. This positive experience changed my work practices and attitude proactively.

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