1. Authority Data in NLK

The National Library of Korea (NLK) developed KORMARC format for Bibliographic Data in 1980 and bibliographic databases for holdings have begun to be built by computers since 1984. At that time, headings for bibliographic data were established by reference to card catalogs for authority records by 1999. In 1990, NLK established 'Korean Library Information System Network (KOLIS-NET) Construction Plan' which connected all the libraries in Korea by networks. Its objective was to share bibliographic databases through the library cooperation. The plan make possible to establish the database of retrospective materials that have not computerized. The volume of bibliographic databases was rapidly increased. At the same time, the standardization of headings were required due to the necessity of bibliographic data share with domestic libraries. Accordingly, NLK asked Society for Information Management to develop a draft of KORMARC Format for Authority Data in 1993. The draft was reviewed through the public hearing and approved as Korean Standard(KS X 6006-4) in December 1999.

Standardized “Rules for headings” are essential for creating authority data. As mentioned in the 1st meeting January 2001, there are two rules developed for the description : KCR3(Korean Cataloging Rules. The 3rd Ed.) and KORMARC. The current cataloging rule which prescribes heading in only the KCR2. But it is assumed that this rule is not appropriate as a cataloging rule because it was made in 1966 and has some limitation in application. So it was utilized just as reference. There are also differences in ‘the System of spelling of Hangul’ and ‘Foreign Language Transcription Rules[外來語表記法].’ Under this circumstance some individual university libraries and public libraries develop their own authority file.
According to a survey about the library automation of domestic libraries conducted by NLK in 2000, 35 libraries established authority file for author names that contained 893,586 records. In addition, an authority file including meeting names, uniform titles, topical terms were 946,410 records. Most of those records consist of foreign names and some of them do not follow MARC format. It would be future task that we should be develop standardized authority file by working together with domestic libraries.

<The Authority Records(1999)>

<table>
<thead>
<tr>
<th>Libraries</th>
<th>Personal·Corporate Names</th>
<th>Meeting Names</th>
<th>Uniform Titles</th>
<th>Topical Terms</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NLK</td>
<td>49,814 / 1</td>
<td>7,272 / 3</td>
<td>14,852 / 1</td>
<td>-</td>
<td>49,814</td>
</tr>
<tr>
<td>Public</td>
<td>159,387 / 7</td>
<td></td>
<td></td>
<td></td>
<td>174,239</td>
</tr>
<tr>
<td>University</td>
<td>734,009 / 26</td>
<td></td>
<td>9,317 / 10</td>
<td>21,383 / 9</td>
<td>771,981</td>
</tr>
<tr>
<td>Special</td>
<td>190 / 1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>190</td>
</tr>
<tr>
<td>Total</td>
<td>893,586 / 35</td>
<td>7,272 / 3</td>
<td>24,169 / 11</td>
<td>21,383 / 9</td>
<td>946,410</td>
</tr>
</tbody>
</table>


2. Name Authority Records by KORMARC

Authority records are to contain information that can be sources of controlled description for keeping the consistency of headings in bibliographic description. KORMARC authority records include information such as personal names, corporate names, meeting names, geographic names, uniform titles, topical terms as well as see or “see also from tracings, notes, original cataloging agency, date of cataloging and cataloging rules. This paper explains data elements of authority records in NLK, especially focusing on the headings for names of Japanese, Chinese, and Korean.

2.1 Personal Names

Personal names for heading are described in tag 100 of KORMARC format. In the tag 100, the 1st indicator indicates the form of the entry element of the heading such as forename, surname, family name and titles. And each subfield codes contains various elements to identify the personal names.

2.1.1 Headings - Personal Name(subfield code ▼a)

Apart from the real name, a person may obtain another name as he/she grows up, or one’s real name can be changed due to legislative reasons, marriage or other political, social, and racial reasons. Among writers, some of them prefer their literary names(雅號) or pseudonym to their real names. In this case their literary names or pseudonym may be much more well-known than their real names. Moreover there are different people by the same name. If a person's name is described differently in each his/her works or there is a different person with the same name, established headings and reference entry are determined for making authority records and
elements for identifying other authors are also added.

The description of headings in NLK is based on article 11 (description for headings) of "the NLK regulations for Technical Processing" which are as follows:

Article 11 Description for Headings
1) Description of headings follows each following case.
   case 1. Materials in Korean: described in Hangul (Korean language)
   Case 4. Materials in Roman letters: described in Roman letters
2) Headings combined with foreign languages are described by following 'the Foreign Language Transcription Rule'(外來語表記法)(Ministry of Education, 1986) or 'the Foreign Language Transcription Illustration for new foreign language(外來語表記用例集)’(National Korean Research Institute, 1997).

Although it is common that a person’s name consists of forename and surname, names that may consist only of forenames or literary names. There are names for Asian people such as Chinese, Japanese and Korean do not use 'comma(,)' between forenames and surnames.

Heads for Koreans' names are recorded in Hangul and forenames and surnames put together with no distinction. It is based on regulations of Korean names, 'Hangul Punctuation Law'(Ministry of Education, 1988). Korean language has the 'initial law' which pronounces differently from its original pronunciation in the case of starting personal names(forenames or surnames) with ‘ㄴ’ or ‘ㄹ’. When starting with ‘ㄴ’ or ‘ㄹ’, mostly ‘ㄹь’ is recorded by ‘ㅇь’, or ‘ㄴь’ by ‘ㅇь’.

For example, ‘리순신(李舜臣, Lee Soon-shin)’ is recorded by ‘이순신(Yi Soon-shin)’, ‘로천명(盧天命, Ro Chun-myung)’ by ‘노천명(No Chun-myung)’, and ‘김녀정(金女貞, Kim Nyeo-jung)’ by ‘김여정(Kim Yeo-jung)’. Headings for Korean names are assigned only when literary names, pen names, nicknames, Christian names, or other languages can be found from the material. NLK will have authority records for all Korean authors if the number of staff who are in charge of authority control will be increased.

Heads for Japanese' names are recorded in Hangul by Korean pronunciation, based on the regulations of Japanese names in ‘the Foreign Language Punctuation Law’ in which there are one blank between forenames and surnames with no comma. When Chinese scripts of Japanese names in reference entry are transcribed by Korean pronunciation, forenames and surnames put together with no distinction. 'Initial Law' will not be applied when transcribing by Japanese pronunciation of Chinese scripts. But it will be applied as the same as Korean names when recording by Korean pronunciation. Headings for Japanese' names are all the authors found in the material.

Heads for Chinese’ names are transcribed by Korean pronunciation of Chinese letters. But foreign names are followed by international customs which transcribe by its own language pronunciation and 'Foreign Language Transcription Rule' for Chinese which transcribe in Hangul by pronouncing it in Chinese. For those who lived before 1911 in which people’s names were pronounced in Korean of
Chinese scripts, their names will be pronounced by transcribing in Korean pronounced of Chinese names as before. Chinese forenames and surnames put together with no distinction when transcribing in Korean. 'Initial Law' will not be applied when transcribing by Chinese pronunciation like Japanese names. But it will be applied when recording by Korean pronunciation. So far, headings for Chinese names are applied only when both Chinese names and their Korean transcriptions are found in the same material, however, transcription rules to be changed will be applied for all Chinese authors in the material no matter when their Korean transcription are found in it.

For Western books, LC headings for personal names are used by the time of downloading OCLC data. Books translated in Korean have been transcribed in Korean by Korean pronunciation of Roman letters, but due to the change of book number system to acquisition number per year and unification of authority records for western names, headings will be romanized regardless of originals and copies in the near future rather than creating their own authority records. Western names are divided by a 'comma(,)' between surnames and forenames when they are in Roman letters or in Korean. Initial law is not applied even if the names are in Hangul. In other words, western names do not follow the 'Initial Law' when they are transcribed in Korean by their own pronunciation.

As I just mentioned NLK will change the description of headings for Chinese and western names in eastern books. Accordingly, NLK will examine the revision of the established authority control system and authority data.

Description patterns of headings by the type of the books are as follows:

**<Description of Headings for Personal Names>**

<table>
<thead>
<tr>
<th>Eastern Book</th>
<th>Descriptive Pattern</th>
<th>Examples(at present)</th>
<th>Draft Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean Authors</td>
<td>Described in Korean</td>
<td>尹東柱 → 윤포주 (Yoon Dong-ju)</td>
<td></td>
</tr>
<tr>
<td>Japanese Authors</td>
<td>Described in Korean by Japanese pronunciation</td>
<td>三浦綾子 → 미우라 아야코 (Miura Ayako)</td>
<td></td>
</tr>
<tr>
<td>Chinese Authors</td>
<td>Described in Korean by Korean pronunciation</td>
<td>鄧小平 → 등소평 (Deung So-pyung)</td>
<td>등냥오핑(Dung Sha-o-ping)</td>
</tr>
<tr>
<td>Western Names</td>
<td>Describe in Korean by Korean pronunciation</td>
<td>윌리엄 세익스피어 → 셰익스피어, 윌리엄</td>
<td>Shakespeare, William</td>
</tr>
<tr>
<td>Western Book</td>
<td>Romanize</td>
<td>William Shakespeare → Shakespeare, William</td>
<td></td>
</tr>
</tbody>
</table>

**2.1.2 Additional information**

There is additional information which differentiate other personal names from the established heading for a personal name(subfield code ▼a in tag 100 of...
KORMARC authority record). This additional information is applied for reference entry fields (see from tracing tag 400, see also from tracing tag 500).

- **Personal name in Chinese**(subfield code ▼h)
  In the case of same names of different persons in China, Japan, and Korea, his/her name in Chinese is additionally recorded after the heading for its differentiation and clarification.
  - 100 1 ▼a金潤植=▼h金潤植, ▼d1927-
  - 100 1 ▼a金潤植=▼h金允植, ▼d1936-
  - 100 1 ▼a王義之=▼h王義之, ▼d307-365
  - 400 1 ▼a川端康成=▼h川端康成, ▼d1889-1972 <reference entry>

- **Dates associated with a name**(subfield code ▼d)
  For clarification of same names of different persons, dates can be recorded. Definitive words with dates can be recorded such as "b., d., ca., ?, cent."
  - 100 1 ▼a李仲燮=▼h이중섭, ▼d1916-1956
  - 100 1 ▼a白麟濟=▼h백인제, ▼d1989
  - 100 1 ▼a애들러, 모티머 J.=▼h애들러, 모티머 J., ▼d1902-

- **Titles and other words associated with a name**(subfield code ▼c)
  Titles and other words with a name can be added for its clarification. Additional information will be recorded such as position, social position (ex. Sir, Doctor, Father), titles (ex. Mrs.), capital letters of associations or institutions (ex. KLA), words or phrases with names (ex. Saint, watch repairman).
  - 100 1 ▼a徐載弼=▼h서재필, ▼c박사(Ph.D), ▼d1866-1951
  - 100 1 ▼a朴正熙=▼h박정희, ▼c대통령(President), ▼d1917-1979

- **Dynasty & genealogy**(subfield code ▼f, ▼g)
  Names of kings in Chinese or Korean dynasty were repeatedly used in other dynasties. When the name of a king is chosen by a heading, the name of dynasties and genealogy is additionally recorded for the clarification.
  - 100 4 ▼a조선(Cho-sun), ▼f조선(Cho-sun), ▼g4대왕(4th king), ▼d1397-1450
  - 100 4 ▼a당(Dang), ▼f당(Dang), ▼g2대왕(2nd king), ▼d598-649

- **Title of a work and related information**(subfield code ▼t, ▼n, ▼p, ▼l)
  Title or series title is transcribed in the heading for personal names or titles. Volume numbers or titles are recorded if the title of a work has those information. Its language can be also recorded.
  - 100 1 ▼aLaw, Felicia.▼tWays we move

- **Institution to which field applies**(Subfield code ▼5)
  Under a cooperative system in which a number of libraries can create unified authority records, its Korean library code will be added if a library adds reference tags (see or see also from tracing) into the established authority record.
  - 040 ▼a011001▼c011001
- 100 1 ▼a고은=▼h高銀,▼d1933-
- 400 1 ▼a고은태=▼h高銀泰,▼d1933-
- 400 0 ▼a일초=▼h一超,▼d1933-▼5211032
[The library at Seoul National University adds his Buddhist name]

**<Personal Name--General Information>(100/400/500)>**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Elements</th>
<th>Repeatability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>First</td>
<td>0 Forename</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Surname</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 Family name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 Titles</td>
</tr>
<tr>
<td>2nd</td>
<td>- Undefined</td>
<td></td>
</tr>
</tbody>
</table>

**Subfield Codes**

- ▼a Personal name
- ▼q Full name
- ▼b Numeration
- ▼c Titles and other words associated with a name
- ▼d Dates associated with a name
- ▼f Successive dynasties
- ▼g Genealogy
- ▼h Personal name in Chinese script
- ▼t Title of a work
- ▼l Language of a work
- ▼n Number of part/section of a work
- ▼p Name of part/section of a work
- ▼x General subdivision
- ▼y Chronological subdivision
- ▼z Geographic subdivision
- ▼i Reference indicator phrase (400/500)
- ▼w Control subfield (400/500)
- ▼s Institution to which field applies (400/500)

**2.2 Corporate Names and Additional Information**

Corporate names for headings are transcribed in tag 110 of KORMARC format and all indicators are blank. Corporate names like personal names can be changed because of various reasons such as its purpose or activity and as another name like its abbreviated names or foreign names other than its official name. Generally another name is refered by 'See from tracing(tag 410)', and changed corporate name by 'See also from tracing(tag 510)'.

Description of headings for corporate names is based on No.11(description of headings) of "NLK regulations for Materials Processing". 'Initial Law' is applied not for transcribing in Hangul foreign corporate names by their own pronunciation, but for transcribing by Korean pronunciation like personal names.
Descriptive patterns of headings for corporate names are as follows:

**<Descriptive patterns of headings for corporate names>**

<table>
<thead>
<tr>
<th>Eastern Books</th>
<th>Descriptive</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean corporate names</td>
<td>Described in Korean</td>
<td>韓國圖書館協會 → 한국도서관협회</td>
</tr>
<tr>
<td>Japanese corporate names</td>
<td>Described in Korean by Korean pronunciation</td>
<td>日本圖書館協會 → 일본도서관협회</td>
</tr>
<tr>
<td>Chinese corporate names</td>
<td>Described in Korean by Korean pronunciation</td>
<td>中國國家圖書館 → 中國國家圖書館</td>
</tr>
<tr>
<td>Western corporate names</td>
<td>Romanize</td>
<td>International Standards Organization → 인터내셔널 스탠다드스 오가니제이션</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Western Books</th>
<th>Descriptive</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Romanize</td>
<td>International Standards Organization</td>
<td></td>
</tr>
</tbody>
</table>

If same corporate names are more than two, additional information such as subordinate names or geographic names will be added. Additional information for corporate names is Subordinate unit(▼b), Location of meeting(▼c), Date of meeting or treaty signing(▼d), Number of part/section/meeting(▼n), Form subheading(▼k), title of a work, general subdivision, tracing, etc.

**<Corporate Name--General Information>(110/410/510)>**

<table>
<thead>
<tr>
<th>Elements</th>
<th>Repeatability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st indicator</td>
<td>undefined</td>
</tr>
<tr>
<td>2nd indicator</td>
<td>undefined</td>
</tr>
<tr>
<td>▼a Corporate name or jurisdiction name as entry element</td>
<td>NR</td>
</tr>
<tr>
<td>▼b Subordinate unit</td>
<td>R</td>
</tr>
<tr>
<td>▼c Location of meeting</td>
<td>NR</td>
</tr>
<tr>
<td>▼d Date of meeting or treaty signing</td>
<td>R</td>
</tr>
<tr>
<td>▼g Miscellaneous information</td>
<td>NR</td>
</tr>
<tr>
<td>▼k Form subheading</td>
<td>R</td>
</tr>
<tr>
<td>▼n Number of part/section/meeting</td>
<td>R</td>
</tr>
</tbody>
</table>
2.3 Variant Headings for Reference Entry

A name of a person or a corporate name can be used by various types of a name. As only one name is chosen in a bibliographic and a heading, other types of the name are transcribed as reference entries. In KORMARC authority records, there are three types of cross references: 'see from tracing fields(4XX)' to identify unauthorized forms of headings and other variants not chosen as an authorized form; 'see also from tracing fields(5XX)' to identify different authorized forms of headings related to the authorized form of heading in the 1XX field; 'complex name references(66X)' to contain information about unauthorized forms of name headings, different authorized forms of name headings, and other variants not chosen as the authorized form when the relationships cannot be adequately conveyed by one or more simple cross references. But, NLK does not use 'complex name reference fields.'

In Name Authority Records of KORMARC, see from tracing fields contain unauthorized forms or variants such as literary names, pen names, nicknames, Buddhist names, Christian names, titles(廟號, 諡號, 封號, 追號, 宮號), romanized names, Korean description by Chinese pronunciation, Korean description of Japanese Chinese names, abbreviated forms, etc.

Additional information is the same with additional information of headings for personal or corporate names(see 2.1.2 and 2.2). In addition, there are added some elements that contain characteristics of reference entry. For its display, 'reference instruction phrase(▼i)' controls reference phrases created from reference entry fields(4xx, 5xx) and control subfield(▼w). If reference fields(see, see also) are added to the established authority records of National Authority File, 'Institution to which field applies(▼5)' contains a Korean library code of which a library add a reference field to it.

In NLK, reference entries basically focus on other variants of headings which can be found in the material. Difficulties including the shortage of personnel cause limited...
reference entries because librarians in charge do not have enough time to consult various reference tools. Moreover, contemporary authors in Korea are called generally by their real name even though they have pen names, so authority records of most of the authors are not created.

2.4 Types of Notes

Notes in KORMARC authority records contain other elements related to headings(1XX) and clarify the scope and concept of headings. As types of notes, there are several ones. The first one is for series treatment fields(64X) which contain information concerning the treatment of a series or other multipart item represented by the heading in a 1XX field in the same record. The second one is Nonpublic general note or public general note(667, 680) which contains general information about a 1XX heading for catalogers or users. The last one is source data notes(670, 675) which provide information about a citation of a consulted source that is or is not found about the 1XX heading in an established heading record, an established heading and subdivision record, or a subdivision record.

In addition, there are summary notes(678) which summarize the essential biographical, historical, or other information about the 1XX heading in an established heading record, an established heading and subdivision record, or a subdivision record. Moreover, there are notes for 'deleted heading information(682)' which contain an explanation for the deletion of an established heading or subdivision record from an authority file and the replacement heading; 'application history note which contain information that documents changes in the application of a 1XX heading.

Among the notes, NLK uses source data notes and biological or historical data when creating name authority records. In particular summary notes, biological or historical data contain an author’s birthplace and his/her country of activity if personal names for headings are foreign names and his/her birthplace can be found in the material, or if his/her birthplace and country of activity are different. Examples are as follows:

670 ▼a두산세계대백과(Doo-san encyclopedia, 엔써이버).
   2000 edition

670 ▼a韓國 號 大辭典(Korean pen names dictionary), 1997

678 ▼aEnglish poet, playwriter

678 ▼aSocial educator, children’s literature writer

678 ▼aborn in Britain, studied arts in Paris, published children’s books in U.S.A.

678 ▼apresident of Miyamoto Building Institute
2. 5 Characteristics of KORMARC Format

- Design Principles of Authority Control in KORMARC format is to exchange all kinds of authority data and provide specifications which are needed when library systems exchange records for communications. In this context, KORMARC format for authority data is based on USMARC format following international standards. KORMARC authority records are directly connected to bibliographic records and accommodate international exchange of authority data.

- Not only its structure but are the entire contents of the KORMARC formats enacted as Korean Standard(KS X 6006-4). As a consequence, it is expected that all the authority records that were built by domestic libraries will be unified. Therefore, it is expected that few problems relating with standardization will be revealed when create national authority records through the integration of authority records by all types of libraries.

- Like foreign MARCs, KORMARC reflects and develops characteristics of Korean literature. Compared with USMARC, KORMARC has some elements that have Korean features:
  - KORMARC adds subfield code ‘k(KCR2)’ to descriptive cataloging rules(/10) and ‘k(NLK subject headings)’ to subject heading system/thesaurus(/11) in fixed-length data elements(008). And Modified record(/38) is moved to /28 and Cataloging source(/39) to /32 for the accord with KORMARC Bibliographic format.
  - In tag 646(Series Classification Practice), 'NLK Call Number' is recorded in tag 052(local call number in tag 090).
  - In the case of Chinese·Japanese·Korean names, heading fields for personal names(tag 100, 400, 500) contain subfield code $h(personal name in chinese) which transcribes Chinese letters of personal name($a). Subfield codes $f(successive dynasty) and $g(genealogy) contain information about names of dynasties(朝鮮, 唐) and genealogy(24th king).

3. Conclusion

As I mentioned earlier, we do not have standardized rules for headings. Individual libraries establish their own authority files that are differ from each other. As a consequence, there is some limitation when integrating them under a specific heading rule. At this moment even if a new standardized rule is developed, it will be difficult for every library to adapt the new one. Because all of the existed authority data should be changed.

Corner of library community has suggested the change of the existing system which divides authority data into established and unestablished headings. In reality, it is very difficult to have absoluteness in the standards of selecting for headings. So it is
suggested to use non-authority pattern that treat equally all the headings regardless of established or unestablished because the result of retrieval is always the same in automated systems.

Authority control aims at keeping headings under control and consistency in which retrieval is the core function of cataloging. In Korea, the function of authority control has been replaced by local added entries in bibliographic records. However, the essentials of authority control will be maintained even in online catalog. To improve the existing authority control, there must be preceding assignments that create cataloging rules selecting headings and their formats.

In the age of globalization, library materials are gathered from all over the world. In particular NLK, the number of materials which are from China and Japan have been increased each year. Therefore it is desirable to seek the methods of the joint utilization of the authority data that are develops by individual countries. To do so it will reduce the expanse that spends for the development of database but expect the creation of accurate and standardized database in high quality.