

The Development of Application Profile for OAK Institutional Repository

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OAK (Open Access Korea) hosted by National Library of Korea is the national portal for integrated search of IRs, participating universities, public institutions, researches, and businesses. OAK has collected metadata from member IR systems, and has accumulated them according to the OAK metadata scheme by mapping IRs metadata into OAK metadata scheme. OAK had developed OAK metadata scheme based on DSpace to build OAK portal in 2009, but the initial OAK metadata schemes could not accommodate all the elements that participant IRs wanted. As a result, it brought into missing metadata in harvesting and mapping the metadata from member IR systems, and into searching without the elaborate elements. For solving these problems, this study is to develop new standard OAK application profile which could accommodate member IRs metadata by analyzing member IR metadata and comparing elements between OAK metadata and major IRs such as DSpace, Eprints, BEPress, ETD-db, and dCollection sophisticatedly.

Problems

OAK (Open Access Korea) hosted by National Library of Korea is the national portal for integrated search of IRs. OAK has collected metadata from member IR systems, and has accumulated them according to the OAK metadata scheme. But there are some difficulties in retrieving the resources in national portal level because each IR has used its own elements and sub-elements. Therefore, OAK metadata scheme should be developed to consolidate all the IRs metadata elements.

Objectives

This study is to develop new standard OAK application profile.

- to accommodate and map local IR metadata elements
- to contribute to retrieving the resources in national portal level

Research Methods

- (1) The metadata schemes of 17 among 33 OAK IRs were analyzed in aspect of 15 main elements of Dublin Core.
- Various title elements as sub-elements were used such as translated title, original title, subtitle, part title, and part number.
 - Claim (request for a patent), version (peer-reviewed), and provenance (owner of resource) were used as the element refinement in description element
 - Citation description methods were various according to IRs.
- (2) The representative standard IR metadata schemes were compared such as DSpace, Eprints, BEPress, ETD-db, and dCollection (IR for college and university libraries in Korea, host by KERIS). <TABLE 1> shows the comparison of only title and description elements between 5 IR metadata schemes.

TABLE 1: Comparison table of title and description sections of 5 IR metadata schemes (in part).

| DSpace | | EPrints | BEPress | ETD-db | | dCollection | |
|-------------|----------------------------|-------------------------|----------------------|-------------|-------------|-------------|---------------------|
| element | qualifier | | | element | qualifier | element | qualifier |
| title | | title | title, article title | title | | title | |
| | alternative | alternative title | | | alternative | | alternative |
| | | | | | | | subTitle translated |
| description | | description | | description | | description | |
| | tableofcontents | | | | | | tableofcontent s |
| | abstract | | abstract | | abstract | | abstract |
| | provenance | provenance | | | | | Provenance |
| | sponsorship | funder | | | | | Sponsorship |
| | | grant number | | | | | |
| | | parent project | | | | | |
| | statementofres ponsibility | | | | | | |
| | uri | | | | | | descriptionURI |
| | | | embargo perio d | | | | |
| | | | versions | | release | | |
| | | | peer reviewed | | | | indexed |
| | | publication stat us | publication stat us | | | | |
| | | data collection method | | | | | |
| | | contact | | | | | |
| | | administrative note | | | note | | |
| | | additional infor mation | | | | | |
| | | divisions* | disciplines | degree | name | | |
| | | | | | discipline | | |
| | | | | | grantor | | |
| | | | | | level | | localRemark |
| | | | comments | | | | |

Development of New OAK Application Profiles

The previous OAK metadata scheme was changed -- new elements and sub-elements were added, and elements with similar meaning were integrated into one element or sub-element. The features of new OAK application profile are as follows:

1. The different elements which have same meaning are unified to one element or sub-element. For example, abstract and summary are unified to summary as sub-elements of description.
2. It is to use controlled vocabularies to accommodate the various values such as subjectType, degreeType, eprintType, contributorType, namelidentifier, and identifierType. For example, it is possible to differentiate and accommodate various contributor such as author, advisor, editor, translator, illustrator, examiner, department, reviewer by inputting controlled vocabularies from contributorType.
3. New elements and sub-elements are added such as subject.keyword (keyword written by author), and description.degree (degree type) and so on.
4. According to Dublin Core Metadata Initiative Citation Working Group (2005), bibliographicCitation is to capture the bibliographic citation information for a resource. But, bibliographicCitation is not enough to construct and describe the citation information in uniform. Therefore, in OAK, the citation element was changed as the main and administrative element and was subdivided into citation.title, citation.volume, citation.number, citation.date, citation.startPage, citation.endPage, citation.conferenceName, citation.conferenceNumber, citation.conferenceDate, citation.author, citation.author, citation.edition, citation.place, citation.publisher to embrace all kinds of resource's citation information. These citation related elements are used only as administrative element to get the data from input interface, and identifier.bibliographicCitation was used as element in displaying the citation information by collecting data in citation such as <TABLE 2>.

TABLE 2: Citation description example.

| Property | Value String | notes |
|---------------------------------------|--|--|
| OAK:title | A critique of the FRBR user task and their modifications | |
| OAK:contributor (value=author) | Hider, Philip | |
| OAK:publisher | Taylor & Francis | |
| OAK:identifier.bibliographic Citation | Cataloging and Classification Quarterly, 55(2), 55-74. | This data is displayed for the citation information. |
| OAK:citation.title | Cataloging and Classification Quarterly | This data is used only for getting the data from user. |
| OAK:citation.volume | 55 | |
| OAK:citation.number | 2 | |
| OAK:citation.date | 2016 | |
| OAK:citation.startPage | 55 | |
| OAK:citation.endPage | 74 | |

Conclusion

This study is to develop new OAK application profile which could accommodate local IR metadata element. It could contribute to retrieval with elaborate element in national portal level.

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