Comparison of Dublin Core and MARC/MARC21

There are many metadata standards used to describe or classify data about data. In a library setting, metadata traditionally refers to elements such as bibliographic information about the collection's holdings and physical items; however, today's definition of metadata has evolved to include information about electronic or digital data, rather than primarily a way to describe elements of physical data. Not only do metadata standards serve as systems which describe specific elements of the item which it describes, but the metadata record also serves as an access point for a specific item or resources, be it electronic or physical. The two metadata standards illustrated in this paper are Dublin Core and MARC/MARC21. Dublin Core can be used to describe elements of bibliographic items and various information formats; however, is widely used to describe electronic resources.

In Jenn Riley's *Glossary of Metadata Standards*, Dublin Core is defined as "a basic 15-element set designed to represent core features across all resource formats" and "standardized as ISO 15836-2003, ANSI/NISO Z39.85-2007, and IETF RFC 5013"[1]. Riley defines MARC as "the first major attempt to encode bibliographic data in machine-readable form" and explains that it "uses a mixture of fixed and variable fields to record information" and that "the MARC format in use in the US is known as MARC21". [2]

Dublin Core was created as a result of a discussion at a 1994 WWW conference in Dublin, OH. This discussion led to the creation of a group of professionals who came together to find solutions to the issues they faced when searching the internet. Key members of OCLC and the NCSA (National Center for Supercomputing Applications) joined forces to lead a workshop addressing three common goals, which included agreeing on what descriptive elements to use,
considering how to implement a plan to incorporate usability for past, present, and future online resources, and to decide on a way to promote the decided upon solutions. Eventually there were fifteen elements decided upon which make up Unqualified or "Simple" Dublin

[1] Riley, Jenn, *Glossary of Metadata Standards,* 4.
[2] Ibid, 9.

Core. These elements include title, creator, contributor, description, date, subject, coverage, publisher, rights, format, language, relation, source, type, and identifier. Audience is the unofficial sixteenth core and, when included, the standard is referred to as Qualified Dublin Core. Each element is optional and can be repeated as necessary.

Dublin Core began as a system to provide data on web pages and internet resources. Today, it is still widely used. Reese states that "Dublin Core is one of the most widely used metadata schemas within the library community"[3], He also recognizes that while its simplicity is one reason is used widespread, it can also be a weakness because its simplicity "isn't as granular as many other specialty metadata formats"[4]. This is in stark contrast to, and also an advantage to the limitations of MARC records, which are limited by byte size. On its own, MARC is still one of the most widely used metadata systems in the library and information community; however, it has many limitations. Marc is comprised of authority records, bibliographic records, classification records, community information records, and holdings records. MARC records consist of a complex system of characters and numbers assigned to specific fields. Due to the fact that a MARC record size it limited to the byte size, MARC 21XML records are often created to include more data. For this reason, MARC 21 is used "primarily as a data crosswalking mechanism for MARC between other metadata schemas"[5]. Since it is lossless, it is not limited by byte size; however, since it is used primarily for crosswalking, it is mainly interoperable with other standards as a translator.

Dublin Core is mostly used for describing webpages and electronic resources; however, it can also be used for describing physical archives, museum, or library resources. This standard is an ideal system for describing web pages and resources since its very conception is rooted in internet resources. There is no conversion that needs to take place, unless you are doing a crosswalk from Dublin Core, to another type of system. Unlike MARC21, there is no need to make a conversion or translate the language.

The interoperability between Dublin Core and MARC21 depends upon the specificity of the description requirements. Dublin Core is simplistic by nature, its elements limited to fifteen fields. While the elements can be repeated, they do not allow for the

[3] Reese, Terry. *Building Digital Libraries*, 128.
[4] Ibid, 129.
[5] Ibid, 122.

specific sub- field designations of MARC21. For example, the table below (ignoring UNIMARC and LYBSYS) illustrates that while Dublin Core simply describes "Title" in austere terms, MARC21's title field includes subfields that allow description for specificities such as, proper title, abbreviated title, key title, uniform title, etc.

S.N	Dublin Core	UNIMARC	21-Mar	LIBSYS
1.	Title	200 $a Title Proper 200 $e Other Title Information (for subtitle) 517 $a Other Variant Titles (for other titles)	245 title proper statement 210 abbreviated title 222 key title 240 uniform title 242 collective uniform title 246 varying form of title 247 former title	Title, Sub title, Alternate title, Uniform title

[6]

Figure 1: Comparing Fields

This can be considered as a help or a hindrance, depending on the user's level of expertise and their need for specificity. For example, the simplicity of the structure of the data field of Dublin Core may be preferred by many non-advanced users due to its readability, especially in comparison to the complex characters and numbers used in MARC21. The simple terminology of "Title" is more easily discernible than the number 245.

Figure 2, from the Library of Congress website, illustrates the crosswalk from Marc21 to Dublin Core. Specificity and granularity is lost with a crosswalk from MARC21 to Dublin Core. To say whether this is an advantage or disadvantage really depends on whom you ask. Many information professionals argue that MARC is too granular, while others argue that it is not granular enough. The answer to this question will depend on the needs of the user, or creator of the record, and the item that is being described. The more complex the item, the greater the need will be to describe it in complex terms.

Overall, the main difference between the two standards is the level of specificity and simplicity of the system. Dublin Core is easier to discern, while MARC/MARC21 may take more time to decipher unless the user is already familiar with the characters and codings. Dublin Core is not limited by size as is the case with MARC. Additionally, Dublin Core relies upon repetition of fields to describe certain elements, whereas the MARC standard's sub-fields eliminate the need for repetition.

[6] Chudamani, KS and H C Nagarathna, *Interoperability between Dublin Core, Unimarc, Marc21, with AAR2R as the Standard Frameworks for Cataloguing in the Digital Environment*,188.

MARC fields	DC Element	Implementation Notes
100, 110, 111, 700, 710, 711	Contributor	
720		
651, 662	Coverage	
751, 752		
	Creator	Creator element not used.
008/07-10	Date	
260cg		
500-599, except 506, 530, 540, 546	Description	
340	Format	
856$q		
020$a, 022$a, 024$a	Identifier	
856$u		
008/35-37	Language	
041abdefghj		
546		
260ab	Publisher	
530, 760-787ot	Relation	
506, 540	Rights	
534$t	Source	
786ot		
050, 060, 080, 082	Subject	
600, 610, 611, 630, 650, 653		
245, 246	Title	Repeat dc:title for each. Some applications may wish to include 210, 222, 240, 242, 243, and 247.
Leader06, Leader07	Type	See Appendix 2 for Leader-Type rules.
655		

Figure 2: Crosswalk

[7] Library of Congress. *Marc to Dublin Core Crosswalk*.

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Library of Congress. *Marc to Dublin Core Crosswalk*. http://www.loc.gov/marc/marc2dc.html

(accessed February 22, 2013).