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## A Study on the Design of the Technology Reference Model Based on Technologies of Interoperability in Digital Libraries

(Seonghee Kim)\*\* , (Jeong - Soo Lee)\*\*\*

1)Metadata Management, 2)Library Services, 3)Service Integration 4)Service Management, 5)Open Interface, 6)Network, 7)Architecture 7  
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### ABSTRACT

In order to solve the problems of the digital library's Interoperability and integrated management, we analyzed core technologies for interoperability in digital library in terms of information creation, organization, service. And then we proposed information technology reference model that is composed of 7 scopes. The proposed scope included 1)Metadata Management, 2)Library Services, 3)Service Integration 4)Service Management, 5)Open Interface, 6)Network, 7)Architecture. Those results can be used as a framework for developing interoperable digital library system.

digital Library, interoperability, information architecture, ITA/EA, technology reference model(TRM)

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\*\* (seonghee@cau.ac.kr)

\*\*\* (leezone@gmail.com)

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1.

2004),

가

2.0,

(ITA<sup>1)</sup>)

가

TOGAF<sup>2)</sup>, HP, IBM

(Real-Time Enterprise)

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“

”

DB,

(MIS, ERP)

(CRM)

Library 2.0

가

가

가

가

1) ITA/EA : Information Technology Architecture/Enterprise Architecture

2) TOGAF : The Open Group Architecture Framework

## 2.

### 2.1

가 가  
( 2006).

(IEEE 1990), 가 가

inter - “ , ,  
” operable -  
“ ;  
” .

### 2.2

(Lynch 1993),

(Preston, Lynch 1994).

(interoperabilty)  
가

(Zachman 1987). ,

(Bernard 2004).

(OMB) “ITA

(OMB 2005).

2005 12 “

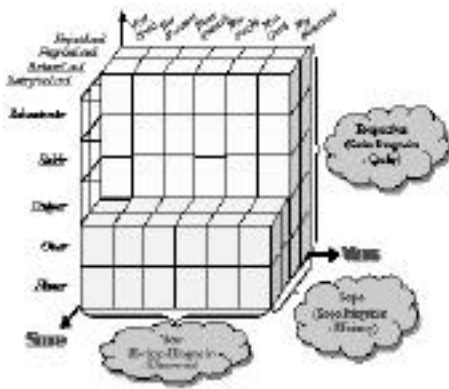
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가 ”



< 1> ITA



< 2>

が

1995

(EIA: Enterprise Information Architecture)

(EA) ,  
(TRM & SP)

< 1>

(Perspectives)

(Views)

(NIST 1989).

( 2006).

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( 2006). 4 20

(Lynch, Garcia-Molina 1995).

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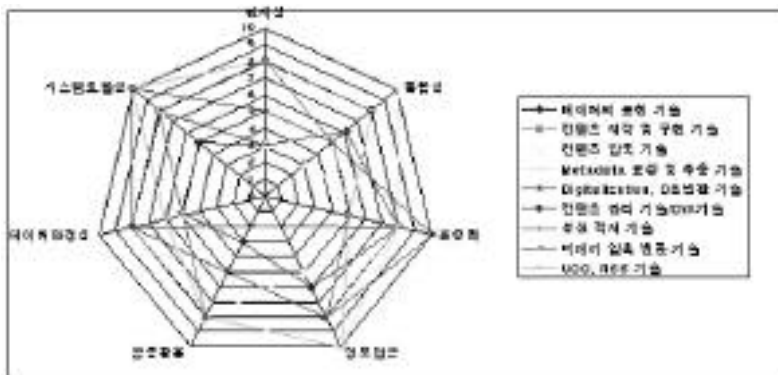
1995 NII IITA(Information Infrastructure Technology & Applications) 가 (repository) ( 2005). < 1> ( 2001; 2005) < 1>

library 2.0

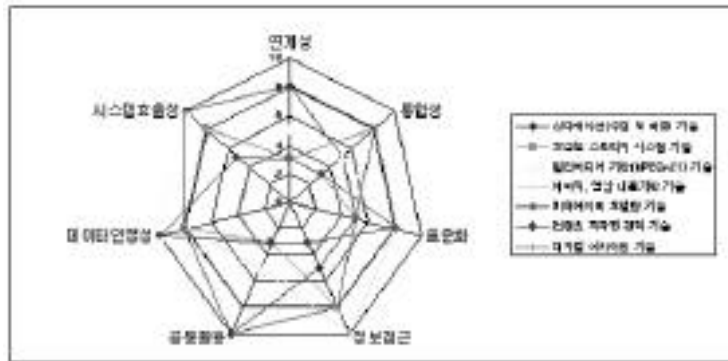
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	, Digitalization, DB , Metadata /DW , UCC/RSS
	( ) , (MPEG - 21) /
	/ , , , , , RFID
	(Intelligence) , Metadata Harvesting /OAI , / DRM
	ITSM / , ITA/EA , /Open Interface , / , OpenAPI/Mashup , / , /Ranking , /

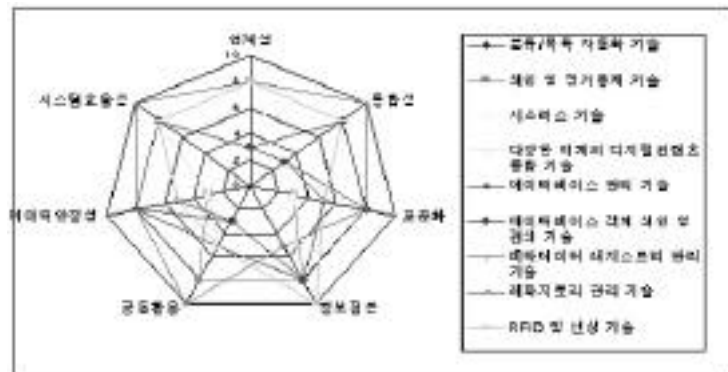
가  
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 / , , 가 (2006).  
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 , 가  
 가  
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 가 . ,  
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 3.2 가 (2006). 가  
 3 가  
 (exploratory test)  
 가 가  
 5 가,  
 , 가



3~7> 가 OAI (harvesting) 가 (CMS), RSS 2.0 가 , RDF , OpenAPI, (MPEG- Mashup 21) , (MDR),



< 4>

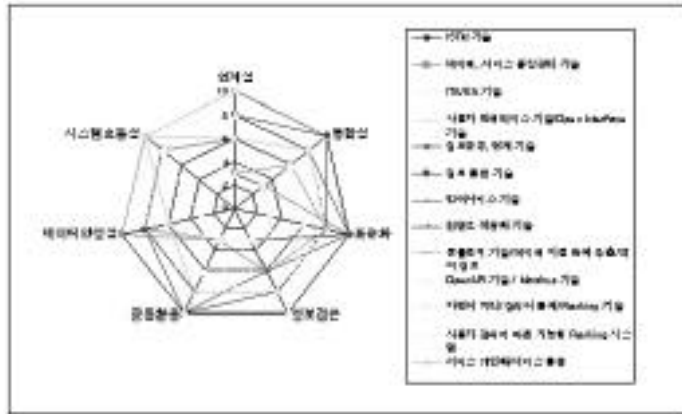


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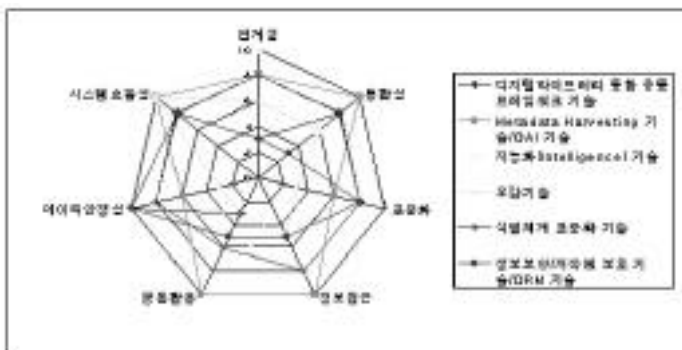
3.3

, Open 가 2.0 가 .

가 1990  
 Jeffrey A. Moore  
 (Moore 1991)<sup>3)</sup>  
 ( 2006).



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3) Technology Adoption Life Cycle



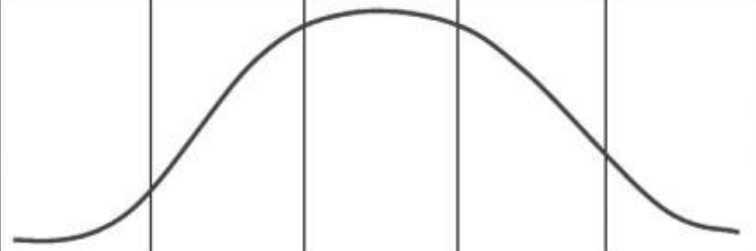
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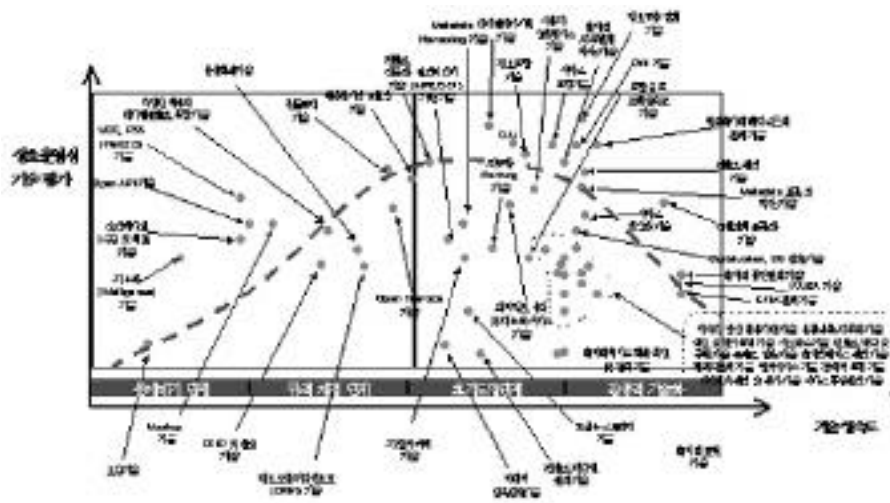
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매출					
사용자	혁신자그룹	선각수용자	전기다수	후기다수	지각수용자
특징	모험	기술에 대한 존경	심사숙고	회의적	전통적

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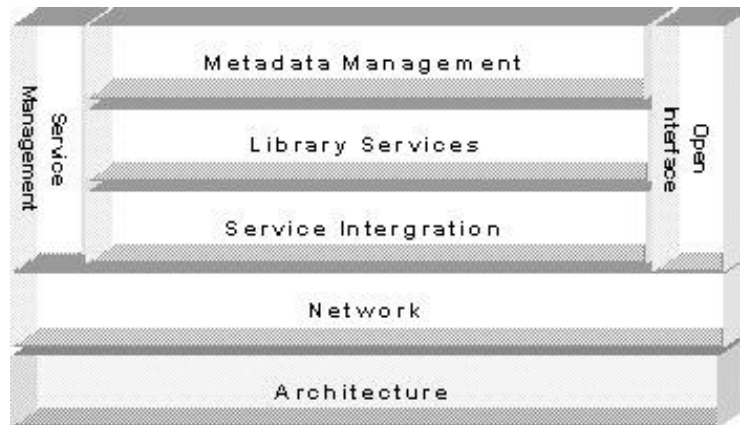
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(Library Management)  
 (Content Management), < 10>  
 (Integrated Service < 10> /  
 Management), (Retrieval Management) Service Management  
 Open Interface ,  
 ERP, MIS, CRM, LAS , ,  
 DB, Metadata Management, Library  
 Services, Services Integration  
 , Network  
 Architecture .

< 2>

1		Metadata		
2				
3		Metadata Harvesting /OAI		
4				
5				
6		/ /		
7				
8				
9		/DW		
10		UCC, RSS		/
11				
12		Open Interface /		/
13		/		
14		OpenAPI / Mashup		
15		Digitalization, DB		

Management Library Services  
 < 11> 20 , / , /  
 < 11>  
 Services Management . Service Integration Metadata  
 Metadata Metadata 가 , Open Interface



< 10>



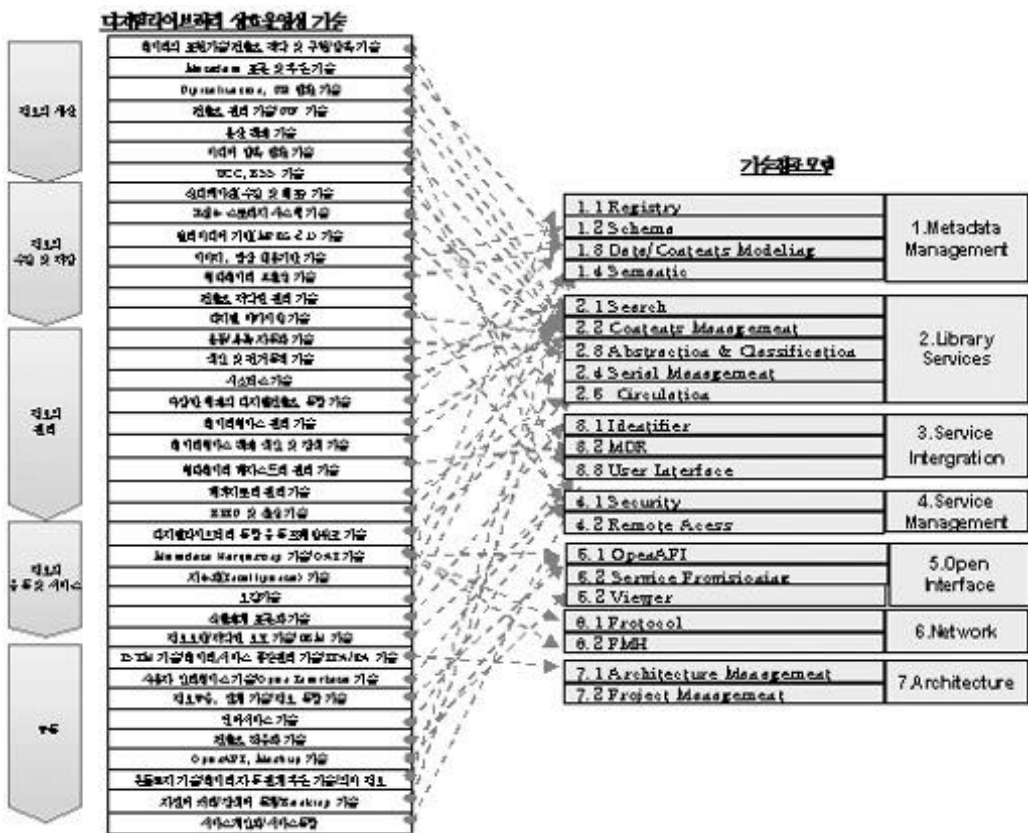
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가 , Network  
S/W  
Architecture

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가 ,  
 가 ,  
 Network  
 Architecture .  
 가  
 1)Metadata  
 Management, 2)Library Services, 3)Service  
 Integration 4)Service Management,  
 5)Open Interface, 6)Network,  
 7)Architecture 7  
 Services Management  
 . Metadata Management  
 . Library Services  
 가가  
 , / , /  
 . Service Integration  
 Metadata

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