语义慕课:
语义网环境下MOOC的发展愿景 *

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(1.　　　　　　　　　　　　　　　　　　210097　2.　　　　　　　　　　　　　　　　241000)

2

2008　　　　　　　　　MOOC

“　MOOC”　　　　　　　　　　　　MOOC
　　　　(SPOC　MOOL　MOOR　PMOOC)　　　　2010　　　　　MOOC
　　[1]　　　　　　　　　　　　　　　　　　　　　“　　　”

MOOC

(Semantic MOOC)

MOOC
2013　　Sergio Miranda
MOOC
[2]

MOOC
MOOC　　　　　2014　3　Nelson Piedra
MOOC　　　　MOOC
[3]　　7

IEEE(Institute of Electrical and Electronics Engineers

) 14   "   "

Kai Michael Höver Max Mü hläuser

MOOC   [4]   =

+MOOC

( )   MOOC   "   "

LOOC(Linked Open Online

Courses)   "   "

MOOC

MOOC

MOOC

MOOC

MOOC

MOOC

    "   "

MOOC

"   "   [5]

2.

2012
"

" [6]

MOOC　　　　　　　　　　　　"　　"

[7]

3.

[8]

MOOC

2014
Michael Höver　Max Mühlhäuse
"
"　(　　1　　)

RDF(Resource Description
Framework)　　　　　　　OWL(Web Ontology
Language　　　　OWL)
SPARQL (Simple Protocol and RDF Query Language
　　　　SPARQL)　　　　1　　　Michael Höver　Max
Mühlhäuse

[9]

Lecture Recording　　Paper Discussion　　Discussion Forum

Application Layer

W3C SPARQL

Data Layer

Triple store　　Triple store　　Triple store

RDF

W3C OWL

Web of Data

DBpedia

coursera　　edX

RDF

W3C OWL

W3C SPARQL

KHANACADEMY

1

4.

MOOC

MOOC

RDF
[13]
HTTP
SPARQL

——

RDF
OWL
SPARQL

( )
2

( )

1
RDF OWL SPARQL
(W3C)

1.RDF
RDF
(Triple
) [10]
MOOC

RDF
MOOC
RDF

2.OWL
OWL
[11]

OWL

[12] RDF

OWL
OWL

3.SPARQL

RDF
SPARQL
RDF

SPARQL

OWL
RDF

RDF

( ) RDF

( ) RDF

MOOC LOD

2

1. " "
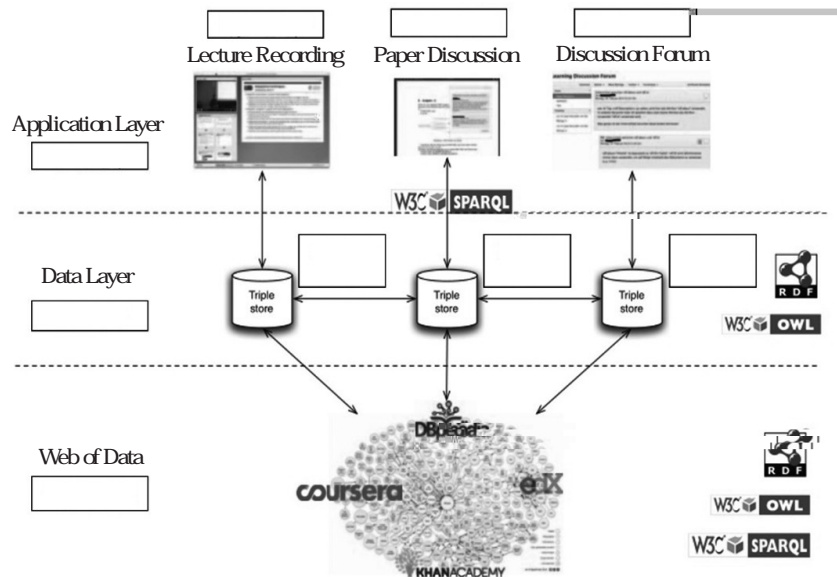
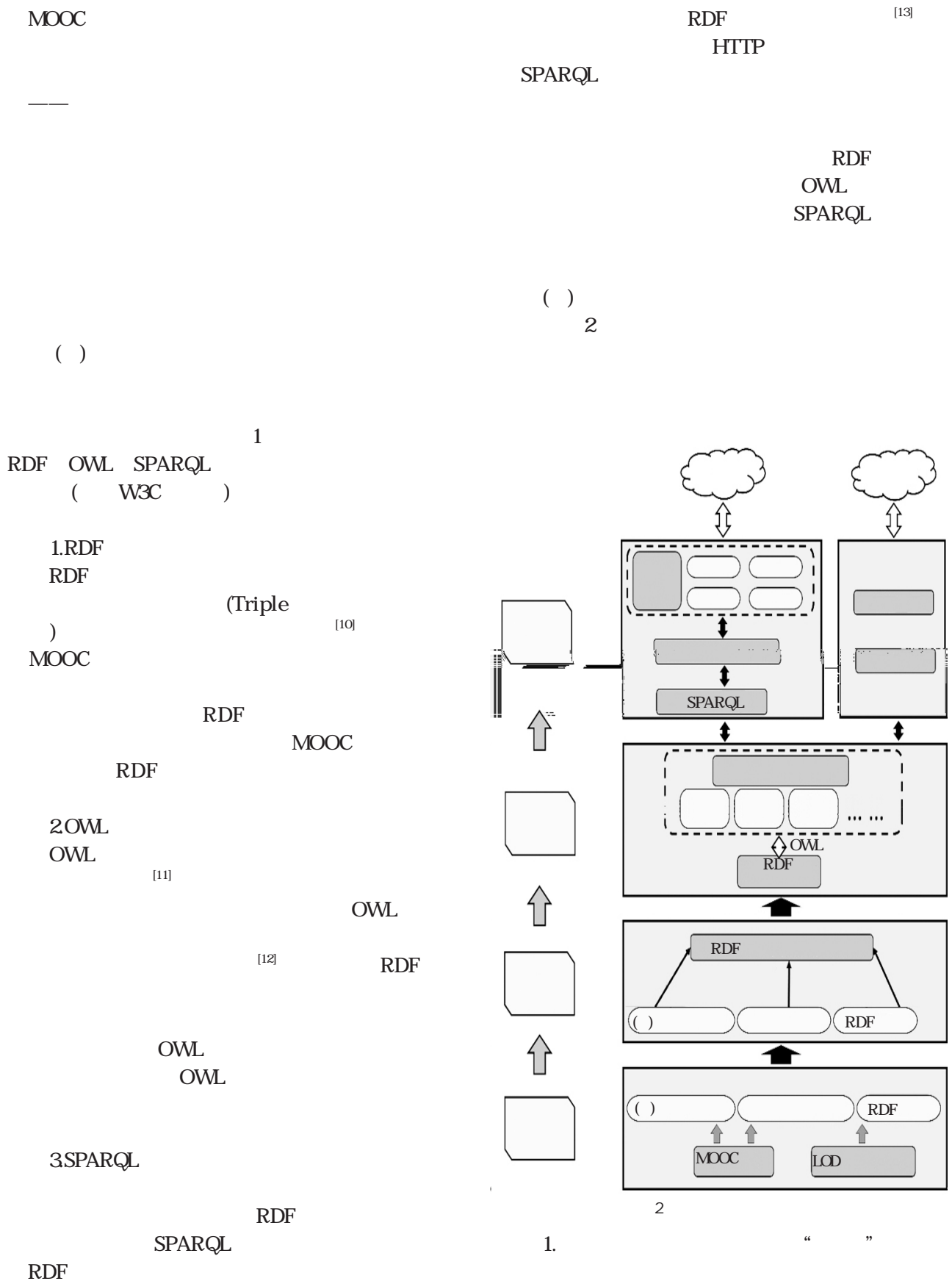MOOC   Coursera   edX   RDF

                                                                                SIMILE RDFizer
                                                              RDF

                                                                        RDF
                        (Linked Open Data Project   MARCRDFizer   OAI-PMH RDFizer
LOD)   LOD   Chris Bize   Richard Cyganiak   OCWRDFizer[18]
2008

                              (Linked Data)   (Drupal   Fedora
                                        2014   Dspace   Eprints   )
8   30   570
                              DBpedia   RDF
                    [14]   SPARQL

                                                        3.   "   "
                                                                                                      OWL
                        LOD
RDF   RDF
            LOD   RDF

                    [15]
MOOC   [19]
                        RDF   [20]

        MOOC
            Gilbert Paquette   Alexis Miara
                    COMETE
            MOOC   [16]
    Sebastian Kagemann   Srividya Bansal
            MOOCLink
Coursera   [17]
    2.   "   "

                        RDF   RDF

    RDF   4.   "   "

                    RDF

            RDF   Michael Höver   Max Mühlhäuse
                                                  MOOCs
            RDF   (Discussion Form)   (Paper Discussion)
                                              (Lecture Recording)
                                              SPARQL
                                                  RDF

SPARQL

Piggy Bank

Magpie

VisiNav   VisiNav

RDF   6

[21]

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863 2002

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MOOC

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MOOC

MOOC

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                            [J].   ,2013,(12):40- 46.

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Semantic MOOC: The Development Prospect of MOOC
under the Environment of the Semantic Web

Abstract: