KISTI

KISTI
E-mail:shkim@kordic.re.kr

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I.

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II.

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- DB (
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.(   )

III.

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1. STARTS (Stanford Protocol Proposal for Internet Retrieval and Search)

: http://www-db.standford.edu/~ gravano/starts.html
: Luis Gravano, Chen-Chuan K.Chang, Hector Garcia-Molina, Andreas Paepcke

1)

(   )

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• (   )
.

• query language
.

• .

2)
Stanford   Digital Library Project
Source(   )
.

(

)
. Source

.

query language

merge the query results

metadata
content
query

3)
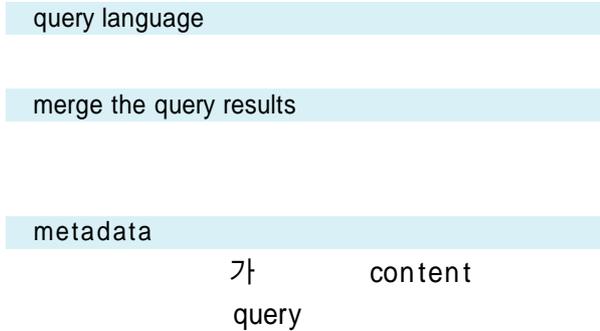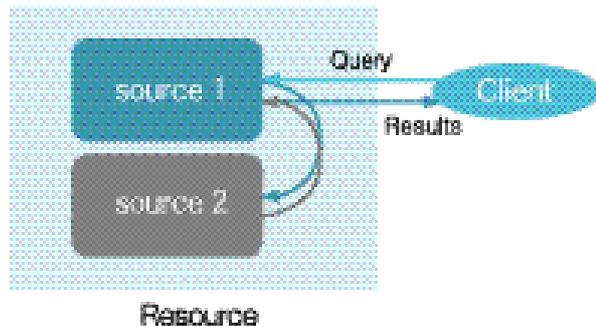
Resource

Resource
Source   , source   contact information

Source
Search engine document collection

Client or MetaSearcher
Resource   source list
(query   source   )
source   metadata content summary

4) Protocol proposal
• Machine-to-machine communication
• Source
(query language)
• source
(result, metadata)

• source

.

S contentSummary resource SOIF
Object
- SOIF Object HTTP POST method

5) Attribute set

Query language

- Filter expression (Boolean model) ranking
expression (Vector model)
query attribute set
- Expression : filter ranking
query Term, Field, Operator,
Modifier
- Basic-1 attribute set

Query Result

- source merge

attribute set
- Query score, source ID, Term-
frequency Document-frequency, Document-
size

Source metadata

- source
, source contents capabilities
attribute set
- Source metadata attribute: source
, Mbasic-1 attribute
set
- Source content summary : Source
contents data , source
relevant
- resource definition: Resource
source contact information, source
list URL

Attribute set communication

- Harvest's SOIF (Summary Object Interchange
Format) attribute-value pair
query result, metadata
- Squery, SQResults, SmetaAttributes,

Starts

Starts
multiple source( )

client server multiple source
protocol .
Starts query language, query result,
metadata attribute set attributes set
attribute set
, module(client, server, source)
attribute set SOIF
Object attribute set
XML Object . , Starts
module
communication(query, query result, metadata
) protocol .

2. GILS(Government Information Locator Service)

1)
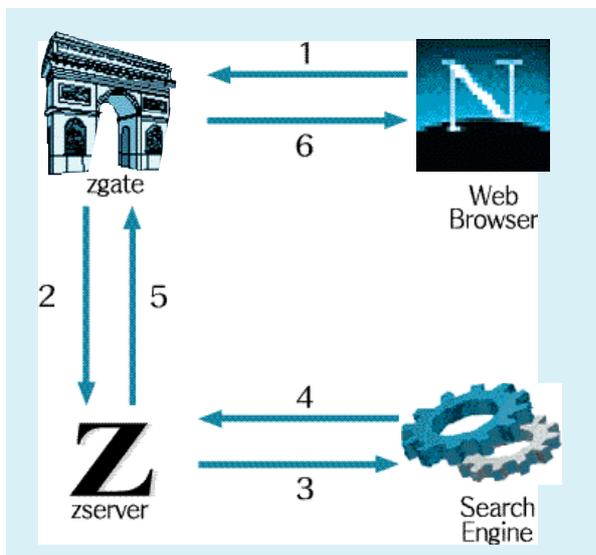GILS(Government Information Locator Service)

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.

.

(information locator) .

,

.

, GILS

1

. . GILS

2)
• HTTP CGI zgate . .

• GILS attribute set Type-1 Query zserver .
• Query
• zserver . (
  SGML/XML, HTML, RDB fields .)
• GILS GRS, MARC, SUTRS record syntax .
• zserver HTML HTTP .

3)
• /
• TCP/IP Web
• - Web
• - Z39.50

4) GILS

3. SDLIP (Simple Digital Library Interoperability Protocol)

1)
Web HTML Form . Form-based interface .

, source
. application
,
.
Search Middleware .
,
SDLIP Search Middleware .

2)
SDLIP
Information Client Search Middleware
LSP(Library Service Proxy) ,
.

• Information Client (Info concentration) (Visualization)
.

• Search Middleware Information Client
  LSP(Library Service Proxy)
  , Client
  XML , LSP
  , Client ,
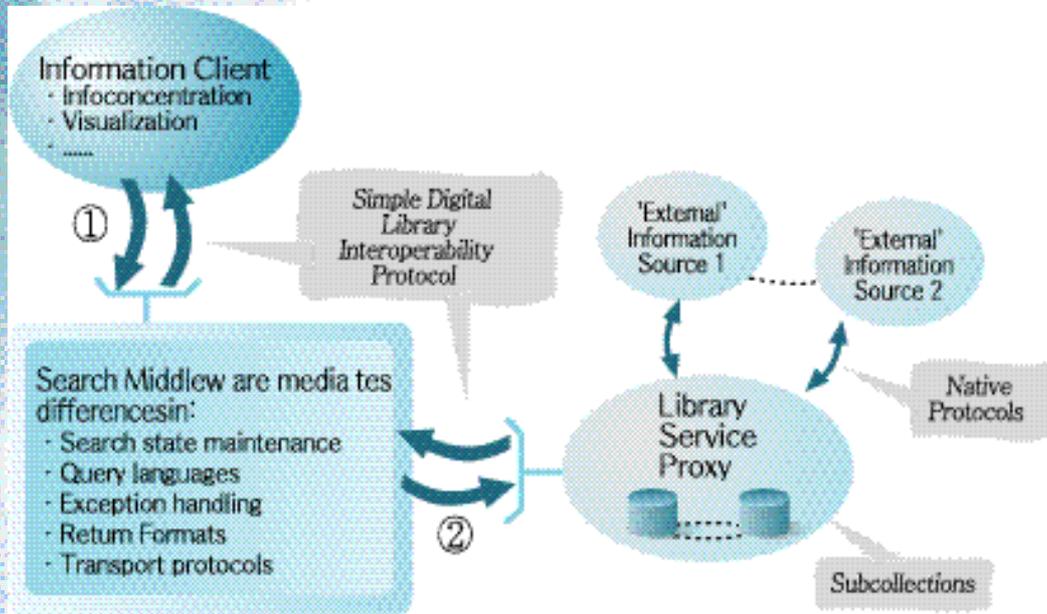
①Client interacts with search middleware using SDLIP
②Middleware interacts with service proxy through SDLIP

, exception handling   ,   . Z39.50   Client
Client   ,   . SDLIP
                      .   Statefull   http   Stateless
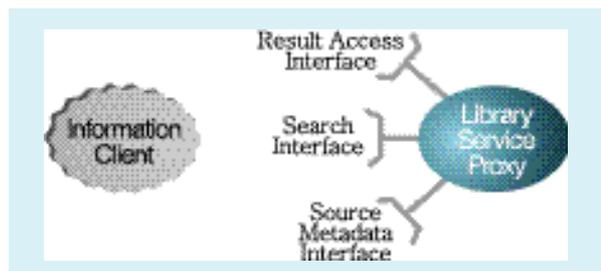• LSP Search middleware   .
              ,   SDLIP   (Management and Extnasibility)
              Middleware   Client   SDLIP   Search Middleware
              .   Source   SDLIP   .
        Http   ,
                          .   , LSP   .
Externel source   Client   .
                                                                                            .

3)
    SDLIP   (State Maintenance)
                Client

                Client
                        .

Stateful server   Client

-Search interface   .   C/S
- Result access interface   client application

- source metadata interface   meta search engine
                         LSP
         .   .

4)   4. DIENST PROTOCOL
   Search Middleware

                                         1)
                ,   HTTP   CORBA,
DCOM   , HTTP
         CORBA   Search Middleware
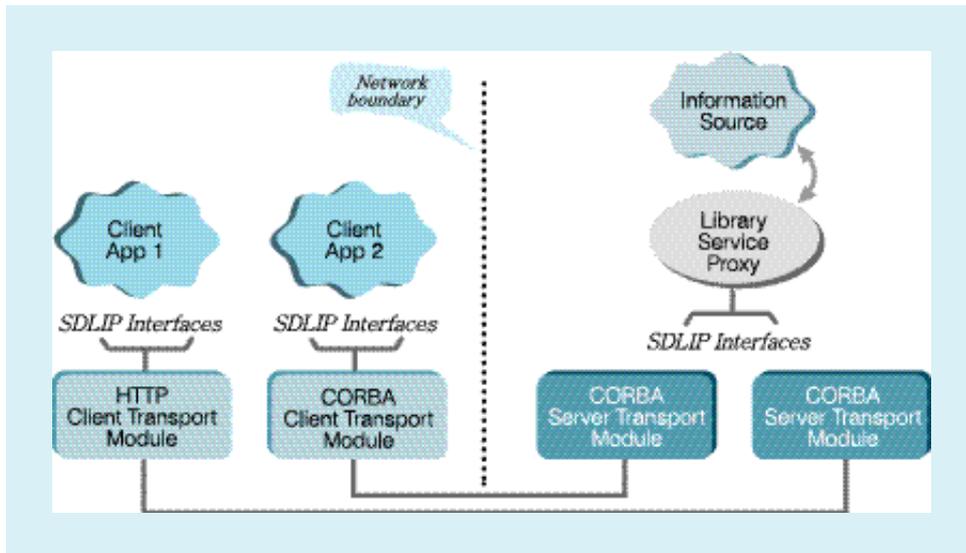   .   . Dienst   NCSTRL (Networked
                                                   Computer   Science
                                                   Technical Report
                                                   Library)
                                                        .

                                                 2)
                                                   Dienst

                                                       . Dienst

                http
CORBA   LSP   .   .
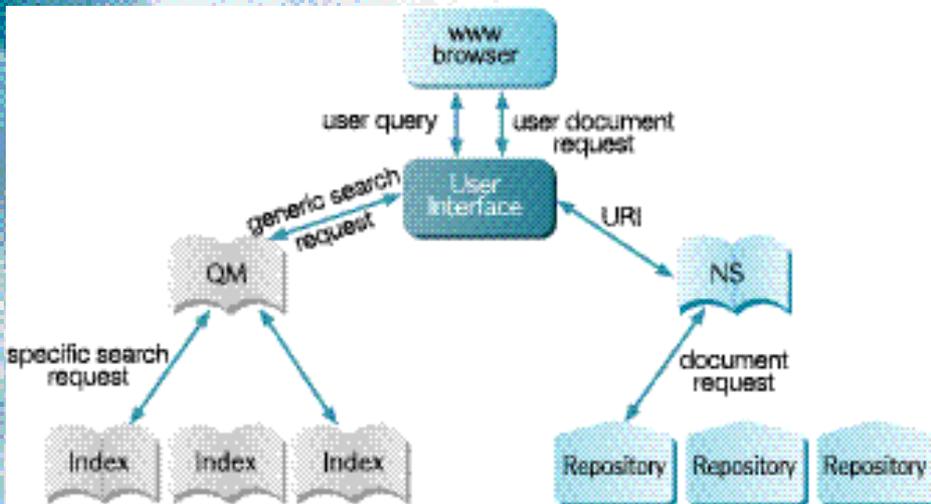java   CORBA HTTP Client   Server   Dienst   (
             ,   client/server application   )   ,   ,
             information access   ,   .
           .   Dienst   open
                                                 protocol(HTTP)   ,
5)   SDLIP
   SDLIP   .

Repository Service

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Index Service

.

Query Mediator Service

.

Info Service

.

Collection Service

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Registry Service

.

User Interface Service

.

3)

Dienst
Verb   .

verb   ,

.

Dienst
backword - compatible
extension
.

,

,   verb
.   ,   verb
.   .   , verb,
verb   "Info Service"
.   .

Dienst   HTTP
URL   GET
method   .
,   Dienst URL
Dienst
.

URL   ,
.

Dienst/ServiceNameVersion/Verb/Fixed-
Arguments/KeywordArguments
Ex) http: //foo. com/Dienst/Repository/
1.2/ Shared?delay= 9&amperage= 7.4

HTTP
HTTP   .
HTTP Content-

Type
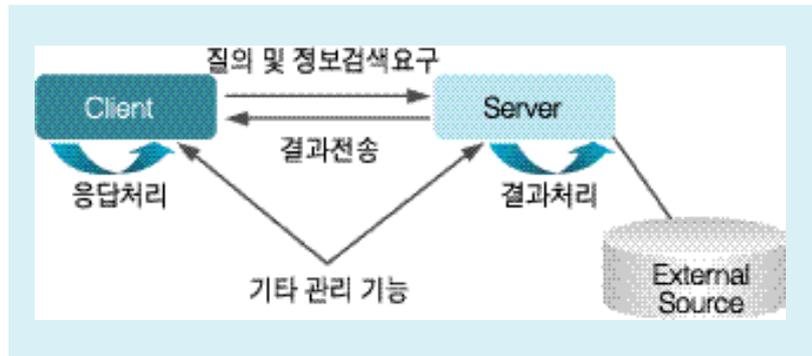MIME   (text/plain, text/xml,
text/html, application/ postscript,
image/gif)   .
content
HTTP Content-Encoding
                        .
                    HTTP
                    . HTTP
     Dienst   200
              .   HTTP
4xx   5xx   .
                    HTTP reason-phrase
                                   .

질의 및 정보검색요구

Client   Server

결과전송

응답처리   결과처리

기타 관리 기능   External Source

Document Model
  Dienst
                              , multiple
version, multiple content-type(MIME types of
output stream)   .

                              .

    index service   discovery service,
    browsing service   .

5. Z39.50

1) Z39.50
• Stateful, Session-oriented
•   (
                    .
• Client/Server   .

2) Z39.50
• Client Server

• Query language   ,
                    parameter   ,
                              ,

Presentation

    -

    -                      ,   ,

    -
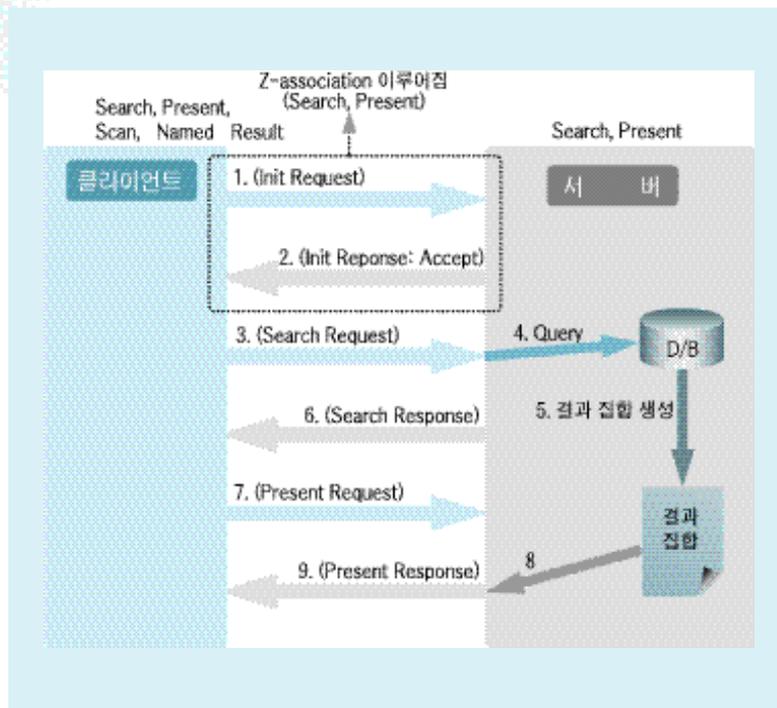
    - Client   , External source
                    , External source
                    , External Source
        Fusion   Set
    -                        Set   Client

    - Client   Presentation

- records)   .

(Present Request)

-         ,   ,   .

                                                    .

'F'   ,

3) Z39.50   'B'   .

Z39.50

.   Z39.50   (Z-association)   ,

.

(Init)

Z39.50

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Z30.50   ,   .

(,Search Request)   .   SUTRS(Simple Unstructured Text Record Syntax)   .

.

(Search Response)   .

                                              ,

(Piggyback   .

IV. KISTI   .
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1.   3)
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   KISTI   .
                            4)
         .   -   /
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                                        5)
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         DB   .
         DB   6)
                                    -

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         (7)
)   -

DB

         .   8)
                    -
2.
1)   X ML   3.
   -              XML
                    .   1)
2)   (   )   -
   -

17

과학기술종합정보시스템

2)
- XML

3) .
- 2.
XML
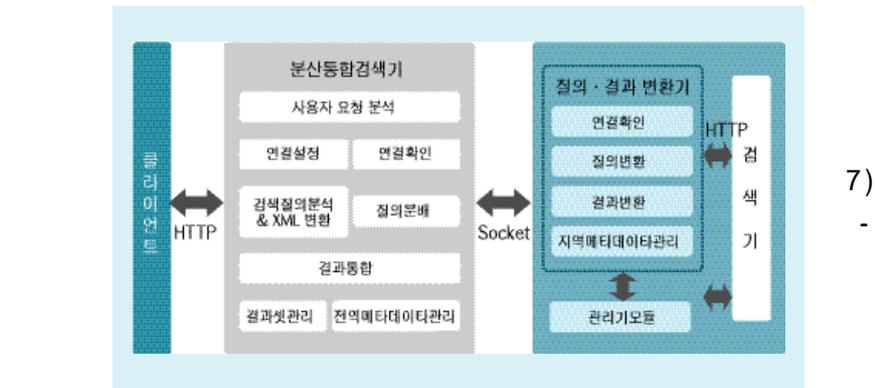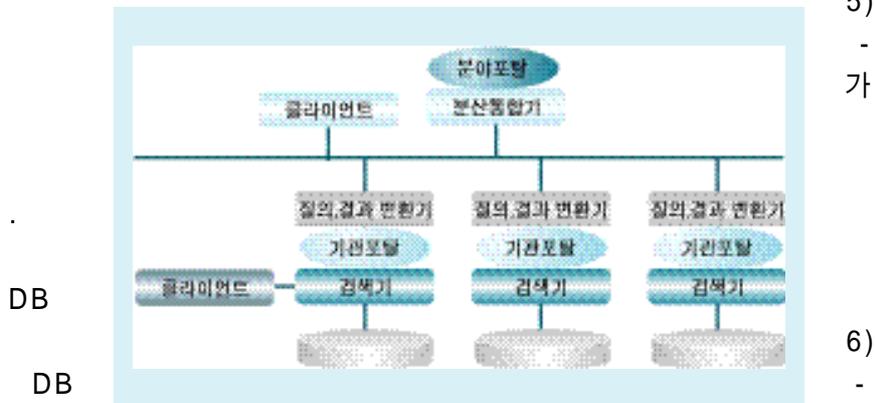
4) .
- DB .

XML
. XML

V.

KISTI .
. KISTI XML

HTML

(1). .
(2).
(3). Presentation 3. Presentation
(4).
(5). Presentation

1.

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Presentation

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URL

Client | **사용자요청분석** | **결과셋관리** | **원천시스템**
- 다음페이지 요청
- 다음페이지 요청
- 다음 N개의 검색 리스트를 출력
- URL을 이용한 전문 요청
- 전문 출력

Z39.50

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4.

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전역메타데이타 | **연결확인** | **연결확인** | **지역메타데이타** | **관리기모둘** | **원천시스템**
- 메타데이타 갱신
- 연결확인
- 메타데이타 파일의 갱신여부 체크
- 메타데이타 버전 전달
- 새로운 메타데이타 요구
- 지역메타데이타갱신
- 전역메타데이타를 소켓을 통해 전송(XML형태)
- 전역메타데이타 갱신

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HTTP

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통합검색 참여희망 시스템 | **분산 종합검색 시스템**
- 프로그램 요청
- 프로그램 다운로드
- 프로그램 설치 및 메타데이타 작성
- **통합검색 시스템 관리자**
- 참여 요청 메일 전송
- 시스템에 대한 검토
- 참여 허용 메일 전송
- 참여 요청 메일 전송

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5.

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DB

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DB   XML

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