

KT S - 1C(X518)

DSA, DAP/DSP

1	1994. 2. 7	

The Directory

Procedures for Distributed operation

KTS-1C(X518)

ABSTRACT

This standard defines directory capabilities, directory models, a framework for the provision of authentication services, the service provided by the directory the behaviour of DSAs taking part in the Distributed Directory application, application service element and application contexts for DAP and DSP, selected attribute types, selected attribute sets and selected object classes. This standard has been produced to facilitate the interconnection of information processing systems to directory services.

HISTORY

Version	Issue Date	Contents
1	1994. 2. 7	Established

The Directory - Procedures for Distributed Operation

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1) X.518 , ISO 9594-4 , -

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X.200 - Open Systems Interconnection - Basic Reference Model

X.208 - Open Systems Interconnection - Specification of Abstract Syntax Notation(ASN.1)

X.500 - - ,

X.501 - -

X.511 - -

X.519 - -

X.520 - -

3

4

3.1 OSI

X.200

3.2

X.500

a)

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b)

3.3

X.501

a)

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b)

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d)

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3.4

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a)

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e) : DSA ;

f) : DSA ;

g) : DSA가
가 ;

h) : DIT DSA ;

i) : DSA가 가 ;

j) : DSA

DSA . ,

DSA () ;

k) : RDN DIT
가 ;

l) : / DIT
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m) : 가 DSA ;

n) : () ;

o) : ;

p) : DSA ,
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q) :
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r) : RDN ;

s) : DSA ;

t) : ;

u) : DSA .

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5.

a) , X.208 .
b) X.407 .

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6

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X.511 .
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(DSA) DIB가 ,
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DSA가 DSA ,
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DIB가 DSA DIB 가 DSA .

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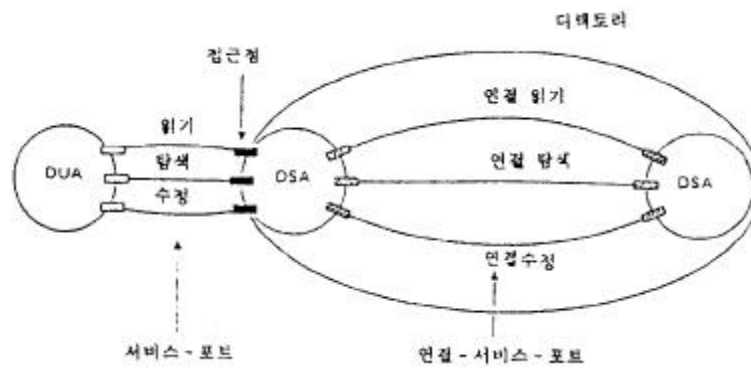
7

X.511

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1/X.518

DSA



1/X.518

DSA

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1/X.518 DSA 가 , ,

DSA , X.511 (OSI X.519).

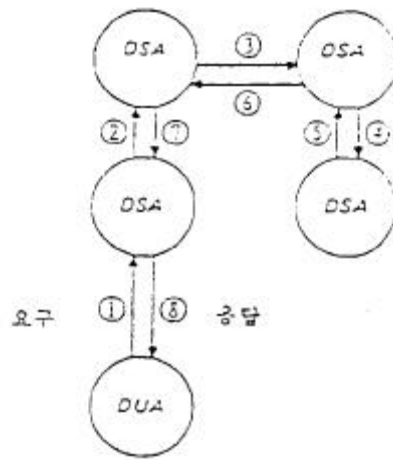
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“ ”
(DSA) (DSA)
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OSI X.519

8 DSA

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 , DSA
가 가 ,
DSA 가 (DUA DSA :
DSA 가 , “ ”, “ ”

8.1
(2/X.518) DSA가 DSA
가
8.2



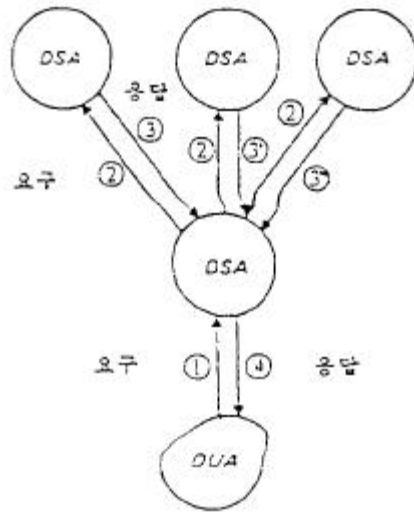
2/X.518

- 2/X.518

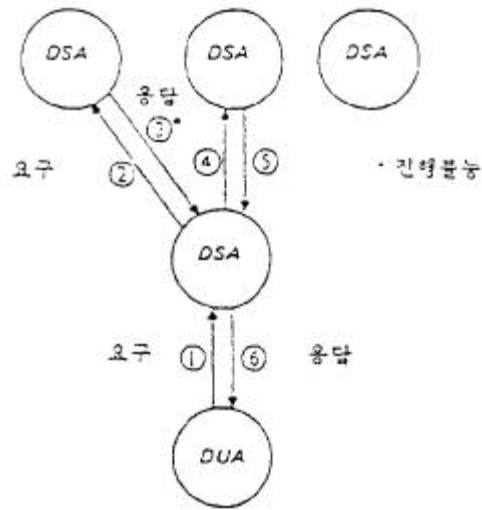
8.2
 OSI가 DSA (3a/X.518
 3b/X.518), DSA (a)
 (b) DSA

DSA . DSA
 unableToProceed ServiceError (가
)
 DSA

- 3a/X.518 3b/X.518



3a/X. 518



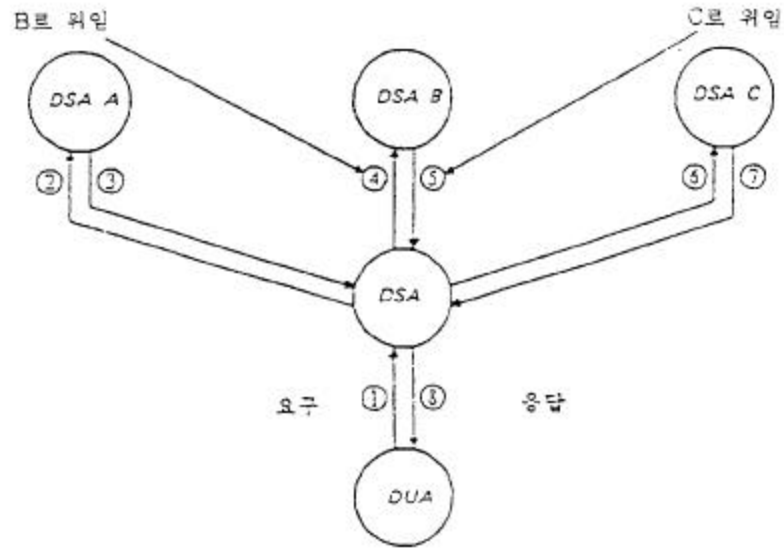
3b/X. 518

8.3

(4a/X. 518 4b/X. 518) DUA DSA(DSA
가) DSA
()
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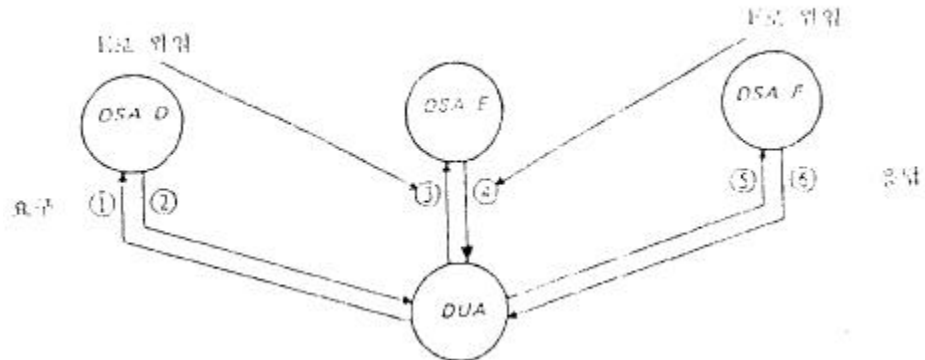
(4a/X. 518) DSA DSA ()

DSA (referral back) (4b/X. 518) DUA DSA



4a/X.518

- DSA가



4b/X.518

- DSA

DUA가

- 4a/X.518 4b/X.518

8.4

DSA가 () / DSA
a) DSA가 () chaining Re
quired Service Error ;
b) DSA가 ,
DSA
1 - / “ ” DSA가

2 - localScope 가 , DSA(DMD)

3 - 가 , chainingProhibited .

9

DIB가 . DSA DIB . DSA 가 ; , 가 DSA . 가 , () (cache entries) 가 . (form Copy) dont UseCopy . DSA DIB . DSA가 DIB DIT / - DIT . DSA 가 . DSA 가 . DSA DIT 가 RDN . RDN DSA DSA DSA 가 , DIT ; , 5/X. 5]8 5 (A. B. C, D. E) 가 DIT DSA (DSA1, DSA2, DSA3) . DSA DIB DSA , DSA DSA 가 DIT DSA DSA 가 . DIT DSA 가 , DIT DSA 가 , DUA가 DSA 가 .

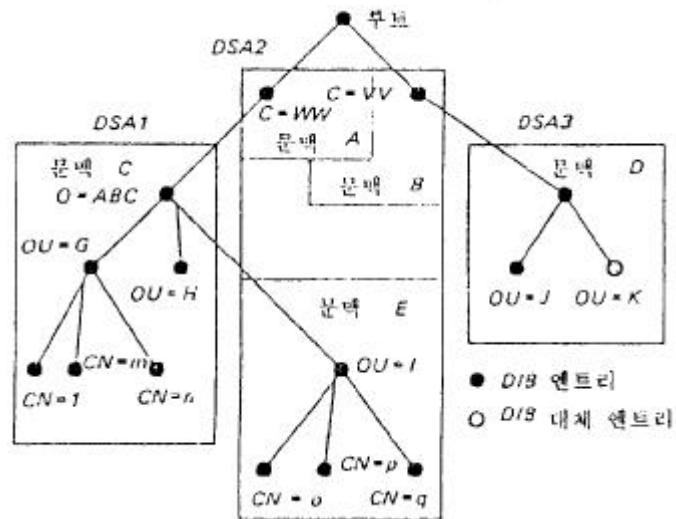
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5/X.518

가 DIT

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DIB DIB
9

DSA : DIB

DIB 가

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DIB 가 DSA가

DSA

DIB

DIT

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DSA 가

a)

b)

DSA가
DSA가

DIT

DSA

DIT

RDN

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- DIT
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10.1

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- 10.3.2 10.3.5
- 10.3.3

가

10.3.4

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10.2

가

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- DSA DSA
- 가 DSA DSA

10.3

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- DIB RDN;

- 가 DIB (

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10.3.2

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- DIB RDN;

- DSA

DSA가 DSA

(10.3.5)

10.3.3

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- DSA

가 DSA

DMD RDN

DSA

가 DSA가 가

(10.3.4) 가

DSA가 DSA

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10.3.4

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- DSA

- DSA

()가

10.3.5

- DSA

- DSA가 ,

RDN

DSA가 DSA (0)

가 가

DSA ()

unableToProceed() ServiceError()

10.4

가

DSA가 가

가

a) 가
 DSA DSA - , 가
 b)
 DSA
 a)
 10.4.1
 DSA (DSA가 (chained port) 가 ,
 , ChainingArgument returnCrossReference 가 TRUE ,
 ChainingResult crossReference 가 ,
 , DSA가 DSA , DSA
 (chaining Argument) returnCrossReference 가 TRUE) ,
 (referral) , 가 가 ,
 (referral) , contextPrefix
 DSA가
 () DSA

10.4.2

10.4.2.1

- DSA가 가
 ChainingArgument ()
 -
 RDN DSA가 (DSA
)가

가

10.4.2.2

DSA, invalidReference() ServiceError()

DSA가 invalidReference() ServiceError()가 DSA가

10.4.2.3

DSA가 requestCrossReference()

DSA가

4 DSA

11 DSA

11.1 X.511 7

가 DSA

1/X.518

11.2 DSA

:
DirectoryRefinement ::= REFINED directory AS
dsa RECURRING
readPort [s] VISIBLE
searchPort [s] VISIBLE
ModifyPort [s] VISIBLE
chainedReadPort PAIRED with dsa
chainedSearchPort PAIRED with dsa
chainedModifyPort PAIRED with dsa

11.3 dsa :

dsa OBJECT
PORTS {readPort [S]
searchPort [S]
modifyPort [S]
chainedReadPort,
chainedSearchPort,
chainedModifyPort }
::= id-ot-dsa

DSA , , , DUA
 DSA7
 DSA

11.4 (X.511) 11.2 11.3

```

:
chainedReadPort PORT
  ABSTRACT OPERATIONS {
    ChainedRead, ChainedCompare,
    ChairedAbandon }
  ::= id-pt-chained-read
chainedSearchPort PORT
  ABSTRACT OPERATIONS {
    ChainedList, ChainedSearch }
  ::= id-pt-chained-search
chainedModifyPort PROT
  ABSTRACT OPERATIONS {
    chainedAddEntry,
    chainedRemoveEntry,
    chainedModifyRDN }
  ::= id-pt-chained-modify

```

12

12.1

12.1.1 DSA

가 , .

12.1.2 DSA

. 12.2

(12.3

12.9)

12.2

12.2.1 X.501

- a) ;
- b) ;
- c) ;
- d) .

12.2.2 X.511

- (Abstract-bind(-))
- a) DirectoryBind ()
- (Abstract-operations()
- b) Abandon ()1

(Abstract-errors ())
 c) Abandoned ()
 d) AttributeError ()
 e) NameError ()
 f) SecurityError ()
 g) ServiceError ()
 h) UpdateError ()
 (Micro ())
 i) OPTIONALLY-SIGNED
 (Data Type())
 j) SecurityParameters ()

12.2.3 X.520 .
 a)

12.3 (ChainingArguments)

12.3.1 DSA

;

ChainingArguments ::= SET {
 originator [0] DistinguishedName OPTIONAL,
 targetObject [1] DistinguishedName OPTIONAL,
 operationProgress [2] OperationProgress DEFAULT {notStarted},
 traceInformation [3] TraceInformation,
 aliasDereferenced [4] BOOLEAN DEFAULT FALSE,
 aliasedRDSs [0] INTEGER OPTIONAL,
 · · · absent unless aliasDereferenced is TRUE
 returnCrossRefs [6] BOOLEAN DEFAULT FALSE,
 referenceType [7] ReferenceType DEFAULT, superior,
 Info [8] DomainInfo OPTIONAL,
 timeLimit [9] UTCTime OPTIONAL,
 [10] SecurityParameters DEFAULT {} }

12.3.2 12.3.2.1-12.3.2.11 .

12.3.2.1 originator ()
 () . 가 CommonArguments ()
 .

12.3.2.2 argetObject ()
 . : 가 , . X
 (,)
 (14.3.1)
 .

12.3.2.3	operationProgress()	DSA	12.5
12.3.2.4	traceInforenced()	DSA	(looping)
	DSA	DSA	가
		DSA	12.6
12.3.2.5	aliasDereferenced()	가	
	FALSE	가	
12.3.2.6	aliasRDNs ()	RDN	가
	aliasDereferenced()	가	가
12.3.2.7	returnCrossRefs()	DSA	가
	FALSE	가	
12.3.2.8	referenceType ()	DSA	DSA
	DSA	가	가
12.7	invalidReference()		
	- (superior)	가	
12.3.2.9	info()	DSA	DMD
			DomainInfo()
	DomainInfo ::= ANY		
12.3.2.10	timeLimit ()	가	
12.3.2.11	SecurityParameters ()	X.511	
	가		
12.4			
12.4.1			DSA
	ChainingResults ::=SET {		
	Info [0] DomainInfo OPTIONAL,		
	crossReferences [1] SEQUENCE OF CrossReference OPTIONAL		
	[2] SecurityParameters DEFAULT {} }		
12.4.2	12.4.2.1 - 12.4.2.3		

12.4.2.1 DSA DMD

12.4.2.2 가 crossReference (

12.8)

GrossReference ::= SET {

contextPrefix [0] DistinguishedName,

accessPoint [1] AccessPoint }

DSA

가 . DSA 가

가

12.4.2.3 X.511

가

12.5

12.5.1 DSA가

OperationProgress ::= SET {

nameResolutionPhase [0]

ENUMERATED {

notStarted (1),

proceeding (2),

completed (3)},

nextRDNTobeResolved [1]

INTEGER OPTIONAL }

12.5.2 12.5.2.1 12.5.2.2

12.5.2.1 nameResolutionPhase ()

RDN 가 DSA

RDN 가

DSA가

RDN (12.5.2.2) 가

DSA가

12.5.2.2 RDN DSA RDN

가 RDN

nameResolutionPhase()가 가

12.6

12.6.1 Traceinformation() DSA

DIT

TraceInforantion ::= SEQUENCE OF TraceItem

TraceItem ::= SET {

dsa [0] Name

targetObject [1] Name OPTIONAL,
operationProgress [2] OperationProgress }

12.6.2 DSA DSA 가

a) 가 dsa
b) 가 DSA가 (X
) 가 DUA 가
()
c) 가 DSA가

12.7
12.7.1 10
ReferenceType ::=

ENUMERATED {
SUPERIOR (1),
subordinate (2),
cross (3),
nonspecificSubordinate (4) }

12.8

12.8.1 Accesspoint () , DSA
DSA Name () DSA OSI
PresentationAddress ()
AccessPoint ::= SET {
ae-title [1] Name
address [2] PresentationAddress }

12.9
12.9.1 ContinuationReference ()
DSA DSA가

ContinuationReference ::= SET {
targetObject [0] Name,
aliasedRDNs [1] INTEGER OPTIONAL,
operationProgress [2] OperationProgress,
rdnsResolved [3] INTEGER OPTIONAL,
referenceType [4] ReferenceType OPTIONAL,
· · only present in the DSP
accessPoints [5] SET OF AccessPoint }

12.9.2 12.9.2.1 - 12.9.2.6
12.9.2.1

13.2.2 , , .

14

14.1 DSA
가 DSA “ ” 1 1
.
DSA 가
:

가

14.2 RDN (14.3)
,
,
, 가 (14.4)
.

11.3 X DUA DSA X
DUA () DSA
, DSA

14.3.1 X X
가 :
X ::=

ABSTRACT-OPERATION
ARGUMENT XArgument
RESULT XResult
ERRORS { . . , Referral, . . }
:

ChainedX ::=
ABSTRACT-OPERATION
ARGUMENT OPTIONALLY-SIGNED SET {
ChainingArgument,
[0] XArgument }
RESULT OPTIONALLY-SIGNED SET {
ChainingResult,
[0] XResult }
ERRORS { ..., DsaReferral, ... }
- A DSA
.

14.3.2 14.3.2.1 14.3.2.2 .

14.3.2.1 DSA가 , DUA가
12.3 .

14.3.2.2 X.511 X DUA가
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14.3.3 가 가 , 14.3.3.1 14.3.3.2
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14.3.3.1 DUA 12.4 DSA
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14.3.3.2 X DUA
X.511 .

14.3.4 가 가 가 .
DSA X.511
가 15 .

14.4
가 DSA 가 : 가
a) DSA
;
b) DSA가 DSA
DSA , 가 가
 , 가
.

15

15.1

15.1.1 DSA . DSA 가 (15.2) 가
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- a)
- b)

15.1.2 X.511
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15.2 DSA

15.2.1 DSA 가 DSA
DSA

8.4 .

DSAReferral ::=

ABSTRACT-ERROR

PARAMETER SET {

[0] ContinuationReference,

contextPrefix [1] DistinguishedName OPTIONAL}

15.2.2

15.2.2.1

15.2.2.2

15.2.2.1

DSA

가

12.9

15.2.2.2

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DSA가

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16

16.1

DSA

DSA

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DSA

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DSA가

DSA

16.2

16.3 DSA

DSA

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a) DSA

DSA

. 18 DSA

DSA

b)

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가 DSA 17

DSA

DSA
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17.1

DSA

DSA가

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b)

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DSA 가

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17.2.1

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DIT가

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18.6

(11/X.518-13/X.518) DSA가

DSA

17.2.2 가
 가 (,) .
 , RDN
 가 DSA
 가, RDN DSA . (18.7.1).
 - DSA
 DSA 가

17.2.3 가
 , DUA
 DSA , 가
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 가 :
 a) ;
 b) DIT ()
). DIT
 ;
 c) (가);
 d) 가 DSA .

17.3
 , DSA가 DSA
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 DSA .

17.3.1 DSA DSA
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 가
 DSA .

17.3.2 DSA
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17.3.3

가 DSA 가 DSA DSA

17.4

17.4.1

DSA
DIT
DSA
18
(17.4.3)

가 가 18.5.1
가 - DSA DUA

17.4.2

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- DSA ;
- ;
- 12.5
- DSA 가
17.4.3 /

17.4.3

() 가
가 DSA 가 ,
DSA

17.4.4

a) chainingProhibited : DSA
DSA DSA
b) timeLimit : DSA DSA
가 DUA timeLimit
,

(UTC) . ,

DSA .

c) sizeLimit : DSA 가
가 . 가 /
qussrud . DSA
. , 가
DSA
. 가 .

d) Priority : DSA 가 ,

e) localScope :

f) scopeOfReference : DSA가 (referral)

17.4.5

17.4.5.1 DSA가

DSA

unwillingToPerform

17.4.5.2 DSA가

가 DSA

가 가

unavailableCriticalExtension

DSA

, X.511 10.1.1

17.4.6

17.5

가

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가

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가 . , 가 .
DSA

가 가 .
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가
가 18.9

DSA가

18 DSA

18.1

(DUA DSA)

DSA

DSA

. DSA가

가 ,

가

18.2 DSA

DSA

DSA

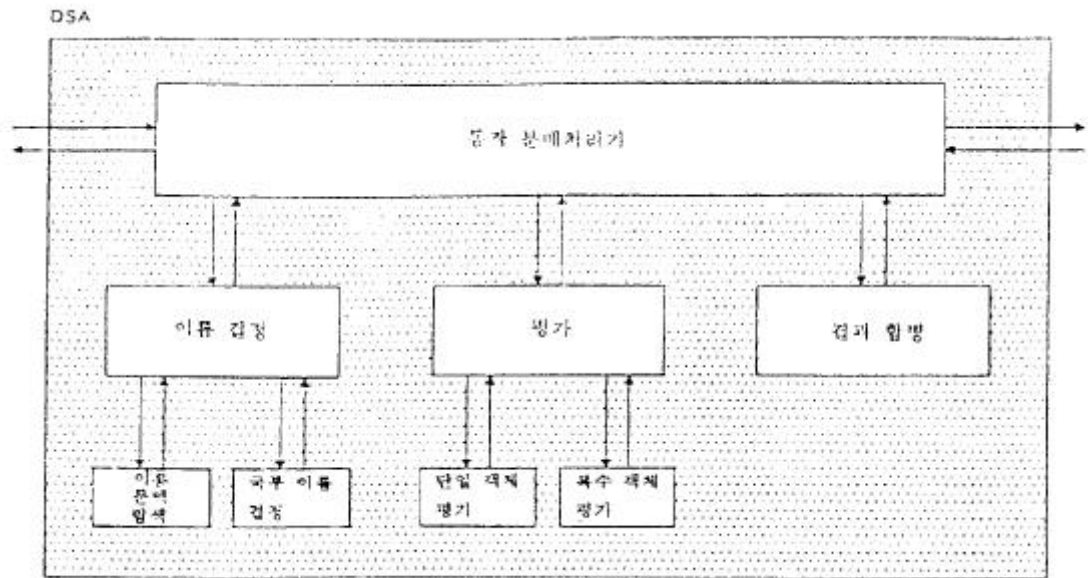
6/X. 518

DSA

DSA

17.2

6/X. 518 , 가, 가, 가 : , , ,
6/X. 518



6/X 518

DSA -

18.2.1

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가
가 DUA DSA

18.2.2

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18.2.3

DIT

" "

18.2.4

RDN

RDN

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RDN

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18.2.5 가
가
가
가

18.2.6 가
가, , , RDN
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18.2.7 가
가, ,
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18.2.8
DSA
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18.3
(
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a) : , , 가, , RDN ,
b) : , .
c) ,
18.3.1 - 18.3.3 . DSA가
DSA
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18.3.1

DSA :
1) 가 ;
2) ;
3) 가 ;
4) 가
;
5) DUA DSA .

18.3.2

DSA (colocate)
DSA
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1) 가 ;
2) ;
3) 가 ;
4) 가 , /
,
,

5) ,

6) DUA DSA .

18.3.3

DSA ,
().

가 .

1) .

2) DSA /

3) X.511 .

4) DUA DSA .

18.4

18.4.1

18.6
(DSA DSA DUA DSA) .

7/X.518 .

/X. 518

18.4.2

18.4.2.1

가 DSA

,

가

가

18.4.2.2

가

17.4.4

18.4.2.3

DSA

18.4.3

18.4.4

18.4.5

18.4.6

1)

DSA

RDN,

DUA

(17.2).

DS

2)

DSA

). 가

가

3) (DUA DSA)

4)

5)

가

() - DSA가

() - DSA가

() -

() - 가

- ()- 가 .
- DSA DUA 가 .
- 6) 가 .
- 7) 가 (가) , ;
- , , .
- 가 가 DSA
- DSA .
- 8) ,
- 가 DUA DSA 가 .
- 가 .
- 가 , 가 가
- 9) DSA .
- DSA
- 10) 가 가

- () ()
-
- , 가
- ()
- 11) 가 .

18.5

- (17.4.2)
- 가 DSA
- , DSA가
- 12.6
- 가 , 18.5.1 18.5.2

18.5.1

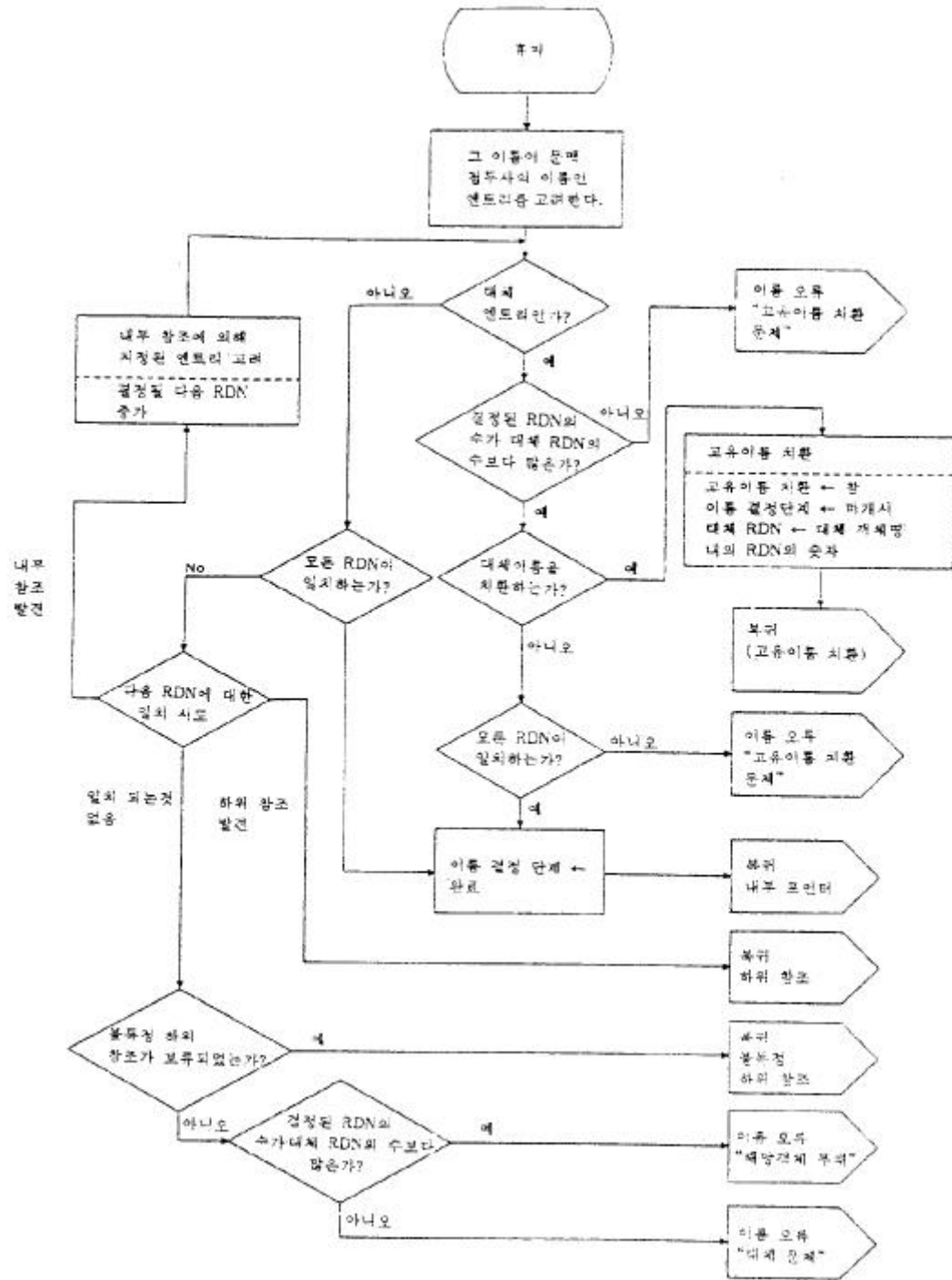
- DSA가 가
- (가) 가 , DSA
- 18.4

18.5.2

- (,) DSA
- DSA가 가()

DSA 가 .
 () ,
 . ()
 . (가) 가

18.6 , , 가
 . 7/X. 518 .
 가 .
 1) (8/X. 518).



9/X 518

가

가

가

18.6.1

- ;
- ();
- ;
- ;
- RDN ;
- ;

18.6.2

- 가 .
- :
- ;
- () ;
- RDN
- ;
- (> ;
- () ;
- RDN.

18.6.3

- 가 ;
- ();
- ();
- (, ,).

18.6.4

- 1) 가 .
- 2) .
- 3) , , , , .
- 4) .
- a) 가 .
- , , .
- 가 1 .
- b) .

18.6.5

18.6.5.1

8/X.518

가 .

18.6.5.2

- ;
- ();

- .

18.6.5.3

- 가 .
- ;
-
- () .
- ;
- ;
- () .

18.6.5.4

- 가 ;
- ():
- ().

18.6.5.5

- 1) 가 .
- 2) 가 .
RDN 가
RDN DSA가
RDN
- 3) .
- 5) .
- 3) 가 RDN 가 4) 2) RDN
- 4) , 9) RDN RDN 1
DSA
RDN 7)
- 5) 가
6 가 9) RDN
- 6) RDN
- 7) RDN
RDN 가 가
8) DSA가 DSA

DSA가 DSA RDN 1
 .
 9) . 가
 DUA 10) :
 .
 10) (RDN) DSA
 .
 가
 .
 RDN 가 RDN-1
 가
 ;
 .

18.6.6

18.6.6.1

RDN
 , , ,
 9/X.518 .

18.6.6.2

;
 - ()
 ;
 - ();
 - ;
 - ;
 - RDN ;
 - .

18.6.6.3

가 가 .
 ;
 - ;
 - () .
 ;
 - 가 ;
 - () .
 ;
 - ;
 - (“ ”) .

18.6.6.4

가 ;
 - .

18.6.6.5

가 .

(null)) .

1) 가 7) . 2)

2) RDN 가 .

가 .

3) .

- 가

RDN

3) 가 RDN ,

RDN 가 ,

1) .

4) RDN RDN 가

5) 가

6) , 가

RDN

가

RDN

. RDN

RDN

7) RDN 가() RDN

() 가 .

8) RDN 가 RDN 가 RDN

9) ,

10) .

9) .

RDN

RDN

(

).

10) RDN 2) .

18.7

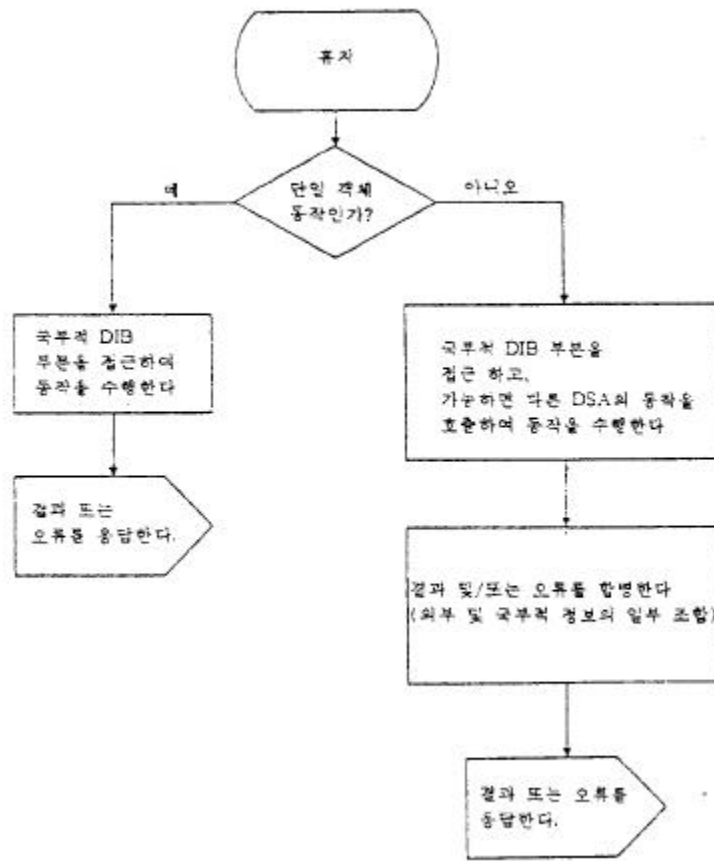
가

가 가 :

a) 가 ;

b) 가 ,

10/X.518 가 .



10/X.518

가

18.7.1

가

가

가

가,

, RDN

X.511

가,

RDN

가 DSA

가

가

DSA가

가

가

가

RDN

가

가 ,

가

가

DSA

18.7.2

가

가

18.7.2.1

가 (" “ ”).

18.7.2.1.1 (I)

DSA가 가 .

"e" .

1) e가 가 .

2) "e" DSA .

3) = e , e

DSA .

- DSA가 가 가 .

가 .

18.7.2.1.2 ()

"e" .

1) e가 가 .

2) DUA DSA .

18.7.2.2

가 . (" ")

가 . (18.7.2.2.1)

DSA가 .

(18.7.2.2.2) DSA가

가 .

18.7.2.2.1 (I)

DSA가 .

"e" .

1) 가 e .

가 2) . , e가

2) 가 , e가

E . 가

5) .

$E'gE$ e .
 E'
 3) e 가 DSA ,
 . DSA $=e$
 .
 가
 4) 가
 가 : 2) E 가 , DSA ;
 e e . e 2)
 5) 2) D . D
 d
 가
 가

18.7.2.2.2 ()

“e” . ‘
 e 가 e' $=e'$
 . 가 ,
 . 18.7.2.2.1 1) 5) 가

18.8

/ 가
 . 가 DSA 가
 ,
 가 가
 가 가
 가 :
 i) 가 DSA
 $ditError$ (.
 ii) 가
 가
 iii) 가
 , 가
 DSA

가

18.9.2

18.9

가

- () ;
- ()

18.9.1

18.9.1.1

DSA가

- DAP DSA DSA DUA (DUA DSA)가

- DUA DSA DSA

- DSA ()가

18.9.1.2

) DSA가 DSA가 가 SIGNED

DUA

DSA

, DSA

IEA

가

가

DSA

DSA가

,

;

- DSA

DSA가

,

가

DSA가

가

18.9.2

(DUA DSA)가 (

)

DSA가 , , DSA DSA

DSA가 , , DSA

a) ()

b) ()

0 가 , DSA , DSA

가 DSA , DSA

A

ASN. 1

ASN. 1

ASN. 1 , ,

DisTributedOperation {joint-iso-ccitt ds(5) modules(1)distributedOperations(3)}

DEFINITIONS ::=

BEGIN

EXPORTS

DirectoryRefinement, chainedReadPort, chainedSearchPort, chainedModifyPort,
DSABind, DSABindArgument,
DSALhbind,
ChainedREad, chainedCompare, ChainedAbandon,
ChainedList, chainedSearch
ChainedAddentry, ChainedRemoveEntry,
ChainedModifyEntry, ChainedModifyRDN,
DsaReferral, ContinuationReference;

IMPORTS

InformationFramework, abstractServece, distributedOperations,
directoryObjectIdentifiers, selectedAttributeTypes

FROM UsefulDefinitions {joint-iso-ccitt ds(5) modules(1)
usefulDefinitions(0)}

DistinguishedName, Name, RelativeDistinguishedName

FROM InformationFramework informationFramework

id-ot-dsa, id-pt-chained-read, od-pt-chained-search, id-pt-chained-modify

FROM DistributedDirectoryObjectIdentifiers,
distributedDirectoryObjectIdentifiers

PresentationAddress

FROM SelectedAttributeTypes selectedAttributeTypes

directory, readPort, searchPort, modifyPort

```

DirectoryBind
ReadArgument, ReadResult,
CompareArgument, CompareResult,
Abandon
ListArgument, ListResult,
SearchArgument, SearchResult,
AddEntryArgument, AddEntryResult,
RemoveEntryArgument, RemoveEntryResult,
ModifyEntryArgument, ModifyEntryResult,
ModifyRDArgument, ModifyRDResult,
Abandoned, AttributeError, NameError, ServiceError, SecurityError,
UpdateError

OPTIONALLY-SIGNED, SecurityParameters
FROM DirectoryAbstractService directoryAbstractService
-- objects and ports --
DirectoryRefinement ::= REFINE directory AS
dsa    RECURRING
        readPort    [S]    VISBILE
        searchPort  [S]    VISBILE
        modifyPort  [S]    VISBILE
        chainedReadPort    PAIRED WITH dsa
        chainedSearchPort  PAIRED WITH dsa
        chainedModifyPort  PAIRED WITH dsa
dsa    OBJECT
        PORTS {readPort    [S],
                searchPort [S],
                modifyPort [S],
                chainedReadPort,
                chainedSearchPort,
                chainedModifyPort }

        ::= id-ot-dsa
chainedReadPort PORT
    ABSTRACT OPERATIONS {
        ChainedRead, ChainedCompare,
        ChainedAbandon}
    ::= id-pt-chained-read
chainedSearchPort PORT
    ABSTRACT OPERATIONS {
        chainedList, ChainedSearch}
    ::= id-ptchained-search
chainedModifyPort PORT
    ABSTRACT-OPERATIONS {
        ChainedAddEntry, ChainedRemoveEntry,
        ChainedModifyEntry, ChainedModifyRD}
    ::= id-pt-chained-modify
DSABind ::= ABSTRACT-BIND

```

```

    TO      {chainedRead,
             chainedSearch,
             chainedModify)
    DirectoryBind
DSAUnbind ::= UNBIND
    FROM    {chainedRead,
             chainedSearch,
             chainedModify}
-- operations, arguments and results --
ChainedRead ::=
    ABSTRACT-OPERATION
    ARGUMENT  OPTIONALLY-SIGNED SET{
                                     chainingArgument,
                                     [0] ReadArgument
    RESULT    OPTIONALLY-SIGNED SET{
                                     chainingResult,
                                     [0] ReadResult }

    ERRORS {
        DsaReferral, Abandoned, AttributeError, NameError,
        ServiceError, SecurityError }
ChainedCompare ::=
    ABSTRACT-OPERATION
    ARGUMENT  OPTIONALLY-SIGNED SET{
                                     ChainingArgument,
                                     [0] CompareArgument }
    RESULT    OPTIONALLY-SIGNED SET{
                                     ChainingResult,
                                     [0] CompareResult }

    ERRORS {
        DsaReferral, Abandoned, AttributeError, NameError,
        ServiceError, SecurityError }
ChainedAbandon ::= Abandon
ChainedList ::=
    ABSTRACT-OPERATION
    ARGUMENT  OPTIONALLY-SIGNED SET{
                                     ChainingArgument,
                                     [0] ListArgument }

    RESULT    OPTIONALLY-SIGNED SET{
                                     ChainingResult,
                                     [0] ListResult }

    ERRORS {
        DsaReferral, Abandoned, AttributeError, NameError,
        ServiceError, SecurityError }
ChainedSearch ::=
    ABSTRACT-OPERATION

```

```

ARGUMENT    OPTIONALLY-SIGNED SET{
                                ChainingArgument,
                                [0] SearchArgument }

RESULT      OPTIONALLY-SIGNED SET{
                                ChainingResult,
                                [0] SearchResult }

ERRORS {
    DsaReferral, Abandoned, AttributeError, NameError,
    ServiceError, SecurityError }

ChainedAddentry ::=
ABSTRACT-OPERATION
ARGUMENT    OPTIONALLY-SIGNED SET{
                                ChainingArgument,
                                [0] AddentryArgument }

RESULT      OPTIONALLY-SIGNED SET{
                                ChainingResult,
                                [0] AddEntryResult }

ERRORS {
    DsaReferral, Abandoned, AttributeError, NameError,
    ServiceError, SecurityError, UpdateError }

ChainedRemoveEntry ::=
ABSTRACT-OPERATION
ARGUMENT    OPTIONALLY-SIGNED SET{
                                ChainingArgument,
                                [0] RemoveEntryArgument }

RESULT      OPTIONALLY-SIGNED SET{
                                ChainingArgument,
                                [0] RemoveEntryResult }

ERRORS {
    DsaReferral, Abandoned, NameError,
    ServiceError, SecurityError, UpdateError }

ChainedModifyEntry ::=
ABSTRACT-OPERATION
ARGUMENT    OPTIONALLY-SIGNED SET{
                                ChainingArgument,
                                [0] ModifyEntryArgument }

RESULT      OPTIONALLY-SIGNED SET{
                                ChainingResult,
                                [0] ModifyEntryResult }

ERRORS {
    DsaReferral, Abandoned, AttributeError, NameError,
    ServiceError, SecurityError, UpdateError }

ChainedModifyRDN ::=
ABSTRACT-OPERATION
ARGUMENT    OPTIONALLY-SIGNED SET{
                                ChainingArgument,

```



```

                                [0] ModifyRDNArgument }

RESULT      OPTIONALY-SIGNED SET{
                                ChainingResult,
                                [0] ModifyRDNResult }

ERRORS {
    DsaReferral, Abandoned, NameError,
    ServiceError, SecurityError, UpdateError }
-- errors and parameters --
DSAReferral ::=
    ABSTRACT-ERROR
    PARAMETER SET {
        [0] ContinuationReference,
        contexPrefix [1] DistinguishedName OPTIONALY}
-- common arguments/results --
ChainingArguments ::= SET {
    originator          [0] DistinguishedName OPTIONAL,
    targetObject        [1] DistinguishedName OPTIONAL,
    operationProgress    [2] OperationProgress DEFAULT {notStarted}
    traceInformation     [3] TraceInformation,
    aliasDereference     [4] BOOLEAN DEFAULT FALSE,
    aliasedRDNs          [5] INTEGER OPTIONAL,
        -- absent unless aliasDereferenced is TRUE
    retrunCrossRefs      [6] BOOLEAN DEFAULT FALSE,
    referenceType        [7] ReferenceType DEFAULT superior,
    info                 [8] Domininfo OPTIONAL,
    timeLimit            [9] UTCTime OPTIONAL,
                        [10] SecurityParameters DEFAULT { }}

ChainingResults ::= SET {
    info                 [0] Domininfo OPTIONAL,
    crossReferences       [1] SEQUENCE OF CrossReference OPTIONAL,
                        [2] SecurityParameters DEFAULT { }}

CrossReference ::= SET {
    contexPrefix [0] DistinguishedName,
    accdssPoint  [1] AccessPoint {

ReferenceType ::= ENUMERATED {
    superior          (1),
    subordinate       (2),
    cross              (3),
    nonSpecificSubordinate (4)}

TraceInformation ::= SEQUENCE OF
    SEQUENCE {
        targetObject Name,
        dsa Name,
        OperationProgress }

OperationProgress ::= SET {
    nameResolutionPhase [0] ENUMERATED {

```

```

                                notStarted (1),
                                proceeding (2),
                                completed (3)},
    nextRDNTToBeResolved      [1] INTEGER OPTIONAL}
DomainInfo ::= ANY {
ContinuationReference ::= SET {
    targetObject      [0] Name,
    aliasedRDNs       [1] INTEGER OPTIONAL,
    operationProgress [2] OperationProgress
    rdnsResolved      [3] INTEGER OPTIONAL,
    referenceType      [4] ReferenceType OPTIONAL,
    -- only present in the DSP --
    accessPoints       [5] SET OF AccessPoint }
AccessPoint ::= SET {
    ae-title          [0] Name,
    address            [1] PresentationAddress }

```

B

B.1

5/X.518 (9) DSA가

5/X.518 (A, B, C, D, E) DSA(DSA1, C

DSA2, DSA3) 가 DIT . DSAI

, DSA2 A, B, E DSA3 D

B-1/X.518-B-3/X.518 가 :

SUPR:

SUBR:

INTR:

NSSR:

CROSSR:

DSAn: DSAn

PS:

CP:

RDN:

DSAn: DSAn

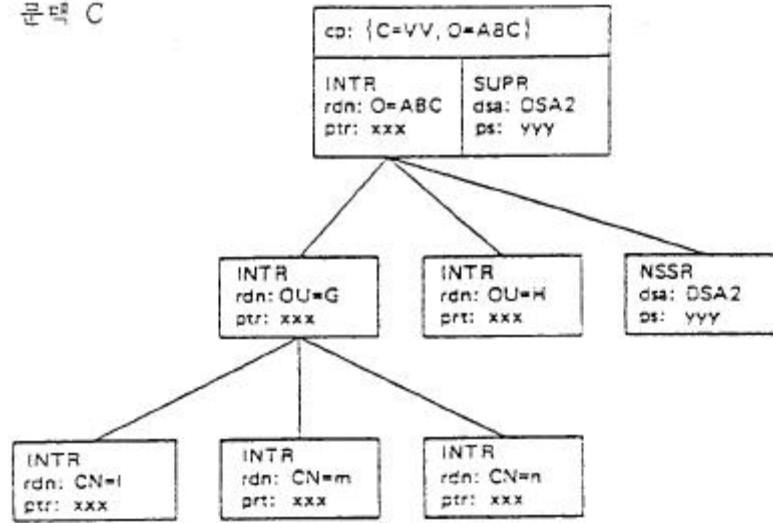
PRT:

AQN:

-

가 DSA 가

문맥 C



B-1/X.518

DSA1

B-1/X.518 DSA1 가

:

{C=VV, O=ABC} C.

{ }

{DSA2, DSA2 }

C

;

{C=VV, O=ABC},

{OU=G}, {OU=H},

{OU=G, CN=l},

{OU=G, CN=m},

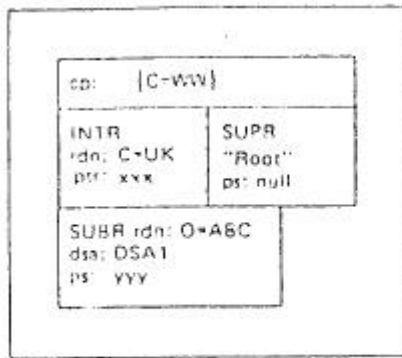
{OU=G, CN=n}.

:

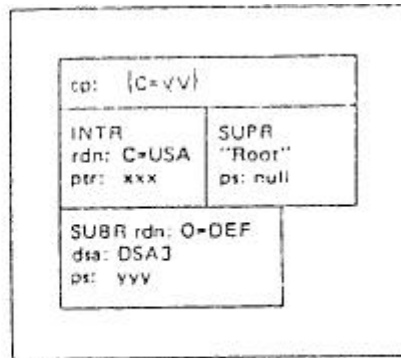
{ }

:

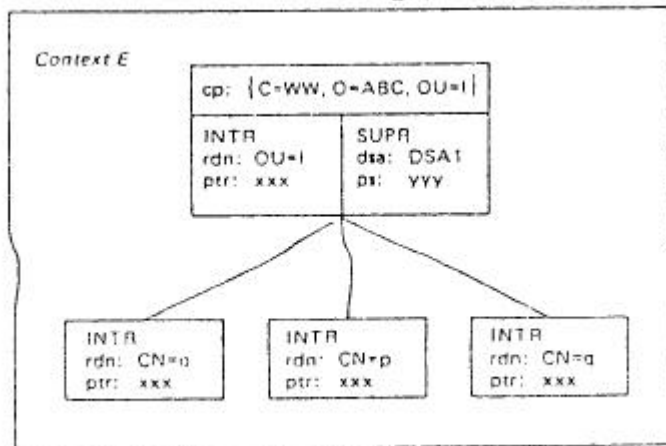
{DSA 2, DSA 2 }



문맥 A



문맥 B



B-2/X.518

DSA2

B-2/X.518 DSA2가 가

{C=WW}, A
 {C=W}, B
 {C=WW}, O=ABC, OU=I }, E.

: { }
 : { }

A

: {C=WW}

B

{C=W}

E

{C=WW, O=ABC, OU=I },
 {CN=o},
 {CN=p},
 {CN=q}.

A

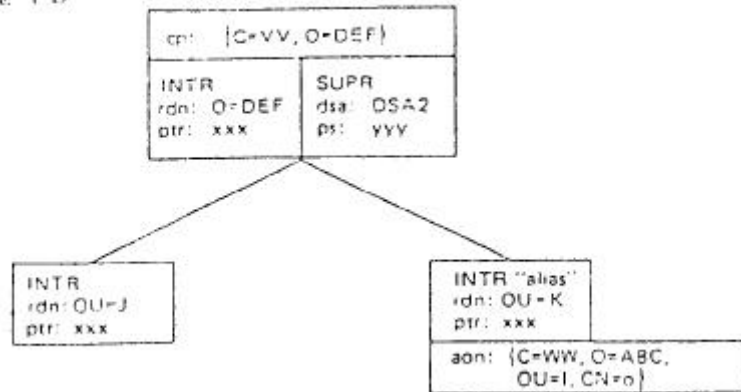
{C=WW, O=ABC}

B

{C=W, O=DEF}

: { }

예 D



B-3/X.518

DSA3

B-3/X.518 DSA3 가

:
 {C=VV, O=DEF}, D
 {C=WW, O=ABC, OU=H}, DSA1, DSA1 } {
)
 {DSA2, DSA2 }
 {DSA1, DSA1 }
 D
 : {C=VV, O=DEF},
 {OU=J },
 {OU=K } {C=WW, O=ABC, OU=I, CN=0}
 ()
 : { }
 { }

B.2

가
 5/X.518 (9) 가 DIT B-1/X.518 B-3/X.518 ()
 B) DSA
 가 DSA1
 1) {C=WW, O=ABC, OU=G, CN=1}
 - DSA1 C {C=WW, O=ABC} 가
 C가 DSA1
 - CN=1 RDN C
 2) {C=WW, O=JPR}
 - DSA1 DSA1 DSA DSA2
 - DSA2 {C=WW} 가 A
 DSA2
 - RDN O=JPR C=WW
 (,)

3) {C=W, O=DEF, OU=K}

- DSA1
- DSA1 DSA DSA2
- DSA2가 B {C=W}
- B DSA2
- O=DEF {C=W, O=DEF} DSA3
- {C=W, O=DEF, OU=K}
- {C=W, O=ABC, OU=I, CN=O}가
- DSA3

:

C

C. 1

X. 501 10

:

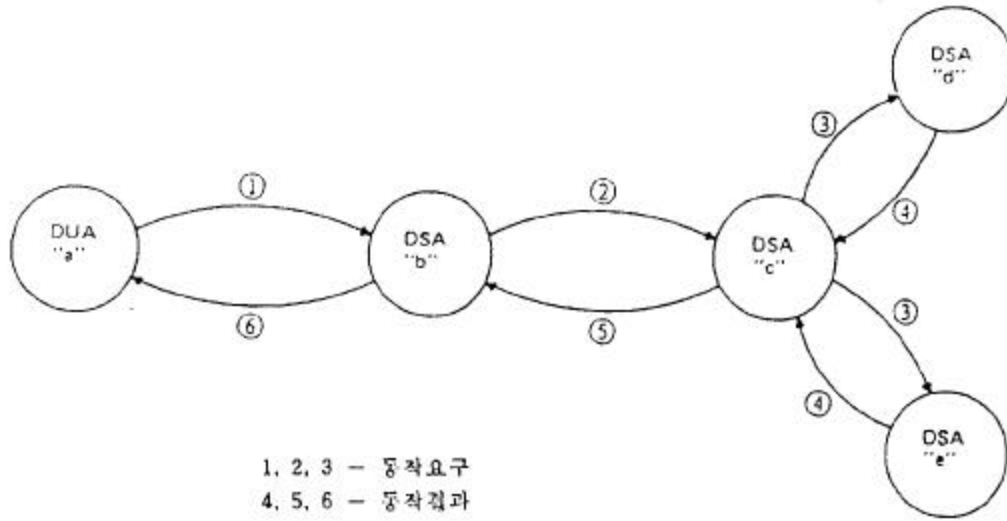
- a) DSP
- b) DSP
- c) DSP
- d) DSP

b)가 X. 509

C. 2

DUA DAP DSP DUA

C. 3



C-1/X.518

C-1/X.518

DSA "a" , DSA "c"

DSA "b", "c", "d", "e"가
DUA "a"

DSA(DSA "b") DSA(DSA "c")
DUA/DSA DSA가
DUA "a" DSA "b"

C.4 DUA DSA

1) C-1/X.518

:

3

QA

a (QA) DUA "a"

C.5 DSP DSP

C-1/X.518

DSA "b"

DSP

DSP

DSA "b"

12.3

, DAP

DSP

DSA(C-1/518 DSA "c")

:

b {ChA, a {QA}} = DSA b

ChA =

[C-1/X.518 (2)] DSA DSP

-
- DSA DSA

C. 6 DSA
 C-1/X. 518 DSA" c " DSA" c " DSA(
 C-1/X. 518 DSA" b ") 12.3
 DSA " c "

$c \{ChA' \cdot a\{OA\}\} = DSA "c "$
 ChA'-

C-1/X. 518 (3)
 DSA " e "

C-1/X. 518 DSA" d " DSA" e " DSA" c "

C. 7

가 DSA

() DSA DSA

가
 - DSA (C-1/X. 518 DSA" d " DSA" e ") 가

- DSA (C-1/X. 518 DSA " c ") DSA
 (DSA가

- DSA DSA DSA DUA
 (C-1/X. 518 DSA " b " .)

C. 7. 1 DSA -
 가 DSA
 , DSA DSP DSA :

C. 7. 1. 1 DSP

DSP :

-

$ChR, OR = ()$

$ChR =$

$OR =$

- :

$Chr, d(OR) = DSA" d "$;

- :

$d \{Chr, OR\} = DSA " d " 가$

-

$d\{ChR, D\{QR\}\} = DSA\ "d"$ 가
- 가
가 DSA

C.7.1.2 DAP

X.511

DSA

QR =

$d\{QR\} = DSA\ "d"$ 가

C.7.2 DSA -

DSA

DSA

DSP DSP

C.7.2.1 DSP

DSA 0

가

DSA가

0

C.7.2.1.1

(C-1/X.518 DSA "c") DSA가 DSA(C-1/X.518
DSA "d" DSA "e")
DSA "c"

12.4

i) $ChR' =$ _____

C.7.2.1.2

DSA가

QR' =

$d\{QR\}, e\{QR\}...$

ii) $QR', d\{QR\}, e\{QR\}... =$ _____

C.7.2.1.3

DSA가

$c\{QR\}$

, QR

가

$d\{QR\}, e\{QR\}...$

iii) $c\{QR\}, QR', d\{QR\}, e\{QR\}... =$ _____

C.7.2.1.4

DSA가

가 ((i)) (ii) (iii)
(ii) (iii)

$ChR', OR', d\{OR\}, e\{OR\}, \dots = ($

$ChR', c\{OR\}, OR'', d\{OR\}, e\{OR\}, \dots = ($ DSA" c "

C.7.1.2.5

DSA가 , ((ii) (iii))

가 ((i) :

$C\{ChR', OR', d\{OR\}, e\{OR\}, \dots\} = DSA "c"가$

$C\{ChR', c\{OR\}, OR'', d\{OR\}, e\{OR\}, \dots\} = DSA "c"가$

C.7.2.2 DAP

가 DSP C.7.2.1

C.7.3 DSA

DSP DAP , DSA DUA DSA

C.7.3.1 DSP

DSA ()

DSA

가 DSA

C.7.3.2 DAP

(C-1/X.518 DSA"b") DSA () DUA

D

ASN.1

ASN.1

DistrigutedDirectoryObjectIdentifiers {joint-iso-ccitt ds(5) modules(1)
distributedDirectoryObjectIdentifiers(13)}

DEFINITION ::=

BEGIN

EXPORTS

id-ot-dsa, id-pt-chainedRead, id-pt-chainedSearch, id-pt-chainedModify;

```

IMPORTS
    id-ot, id-pt
FORM UsefulDefinitions {joint-iso-ccitt ds(5) modules(1) usefulDefinitions(0)};
-- objects --
id-ot-dsa OBJECT IDENTIFIER ::= {id-ot 3}
-- part types --
id-pt-chainedRead OBJECT IDENTIFIER ::= {id-pt 4}
id-pt-chainedSearch OBJECT IDENTIFIER ::= {id-pt 5}
id-pt-chainedModify OBJECT IDENTIFIER ::= {id-pt 6}
END

```