



ATN Directory Services

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Directory Services

- ➡ First version in Doc 9705 Edition 3
- ➡ Defines an ATN X.500 Directory Service
- ➡ Text in Sub-Volume 7



Directory Services Concepts



☞ Information Model

- Schema
- Directory Information Tree
- Directory Information Base
- Object Classes
- Attributes



ATN Directory Schema



- ✎ Defines the types of information found in the Directory, and
- ✎ Defines the logical structure of the information



ATN Directory Information Tree



- ☞ DIT - Further defines the structure of information for the Directory
 - defines a database hierarchy of information
 - defines a database hierarchy of administration control



ATN Directory Information Base



- ☞ DIB – Defines the information stored in the ATN Directory
 - defines data base record structure
 - defines data base record contents



Object Classes and Attributes



- ➡ Object classes define the “records” in the ATN Directory
- ➡ Attributes define the contents of the object classes
- ➡ ATN uses the X.500 standard object classes and attributes – with some specific extensions



ATN Specific Object Classes

- ✎ atn-AmhsUser
- ✎ atn-OrganizationalUnit
- ✎ atn-OrganizationalPerson
- ✎ atn-OrganizationalRole
- ✎ atn-ApplicationEntity



ATN Specific Object Classes (2)



- ✎ atn-CertificationAuthority
- ✎ atn-AmhsDistributionList
- ✎ atn-AmhsUserAgent
- ✎ atn-AmhsGateway
- ✎ atn-Aircraft



atn-CertificationAuthority (3)



- ✎ atn-Facility
- ✎ atn-AmhsMD
- ✎ atn-IdrpRouter
- ✎ atn-DirectorySystemAgent
- ✎ atn-Organization



ATN Directory Systems and Protocols



- ☞ Directory Service Agent (DSA)
 - Maintains the data base
 - Answers directory information requests
- ☞ Directory User Agent (DUA)
 - Interface to the directory information
 - Requests information from DSAs
 - Updates information in the DSAs



ATN Directory Protocols



☞ DSA to DSA

- Directory System Protocol (DSP)
- Directory Information Shadowing Protocol (DISP)
- Directory Management Operations Protocol (DOP)

☞ DUA to DSA

- Directory Access Protocol (DAP)



Users of Directory



☞ ATN AMHS

- Name to O/R address look-up

☞ CM

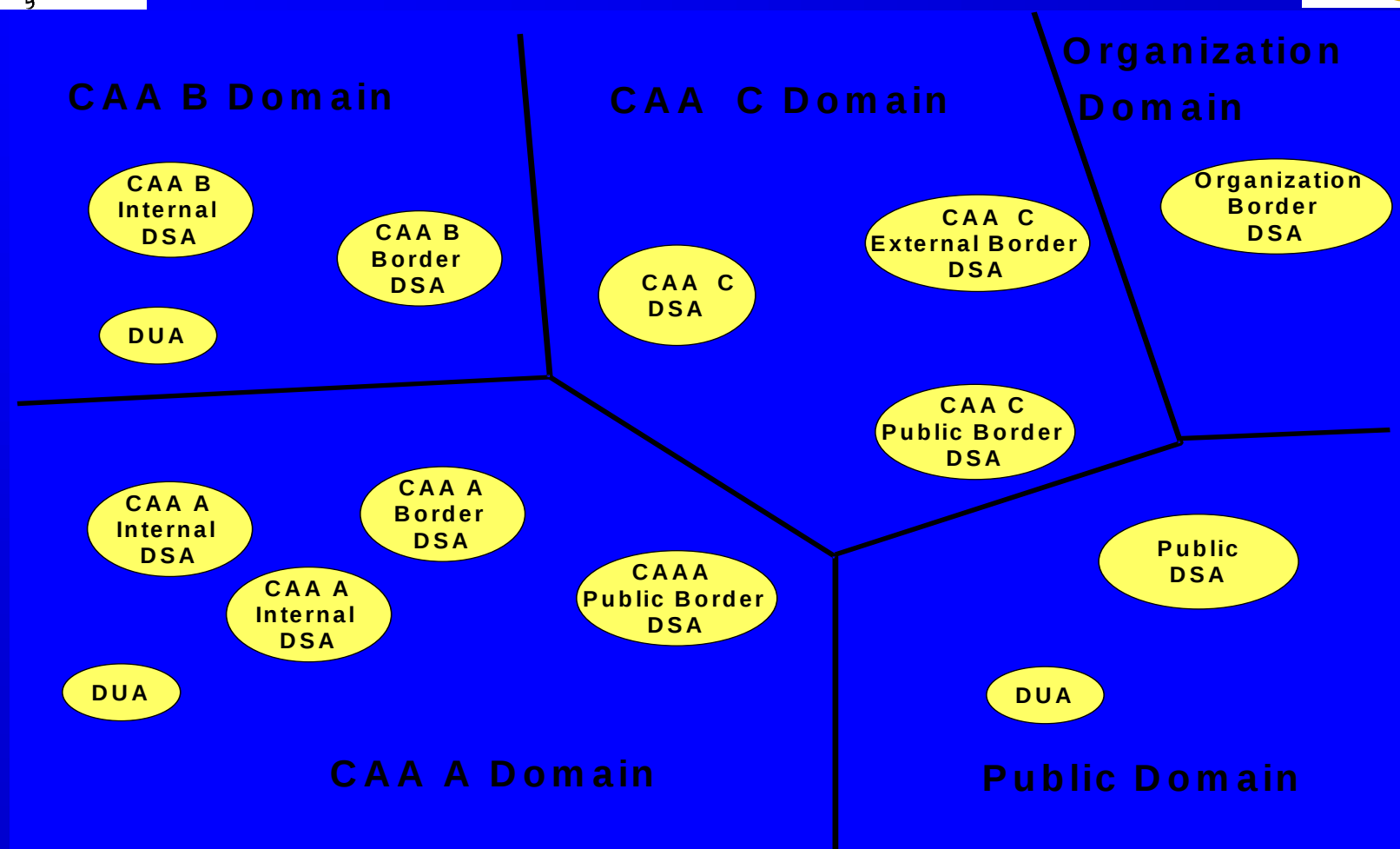
- Application capability look-up

☞ Security

- Certificate look-up

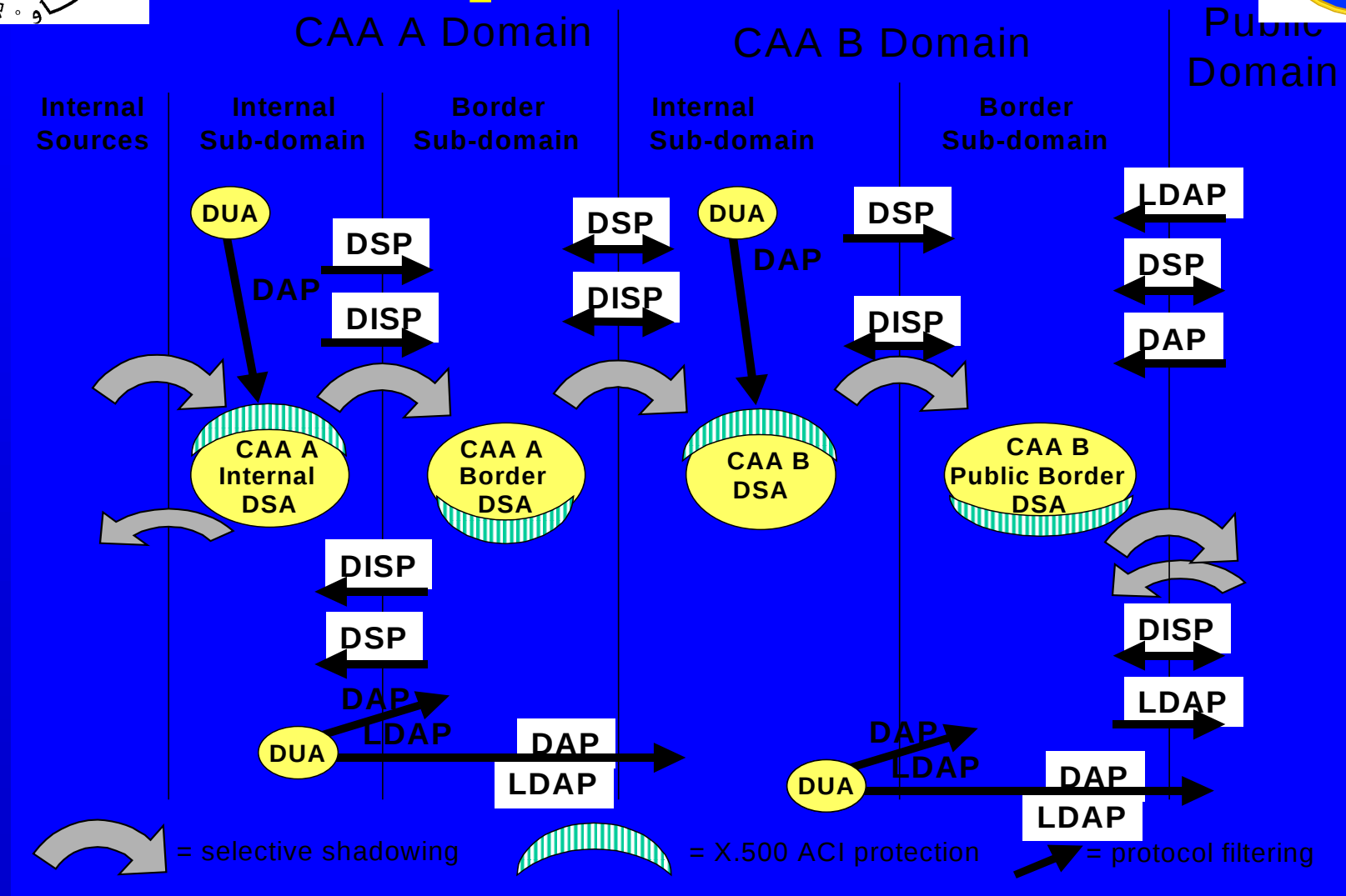


ATN Directory Domains





Example of Data Flow





AMHS Using ATN Directory



☞ Two possible uses of ATN Directory for Users:

- use of directory names at the User Agent
- use of certificates for user/message authentication



AMHS Using ATN Directory (2)

☞ Possible uses of AMHS Directory by MTAs:

- retrieval of remote MTA information

- ◆ NSAP
- ◆ MTA name and password
- ◆ service capabilities