

# Slides for Chapter 9: Name Services

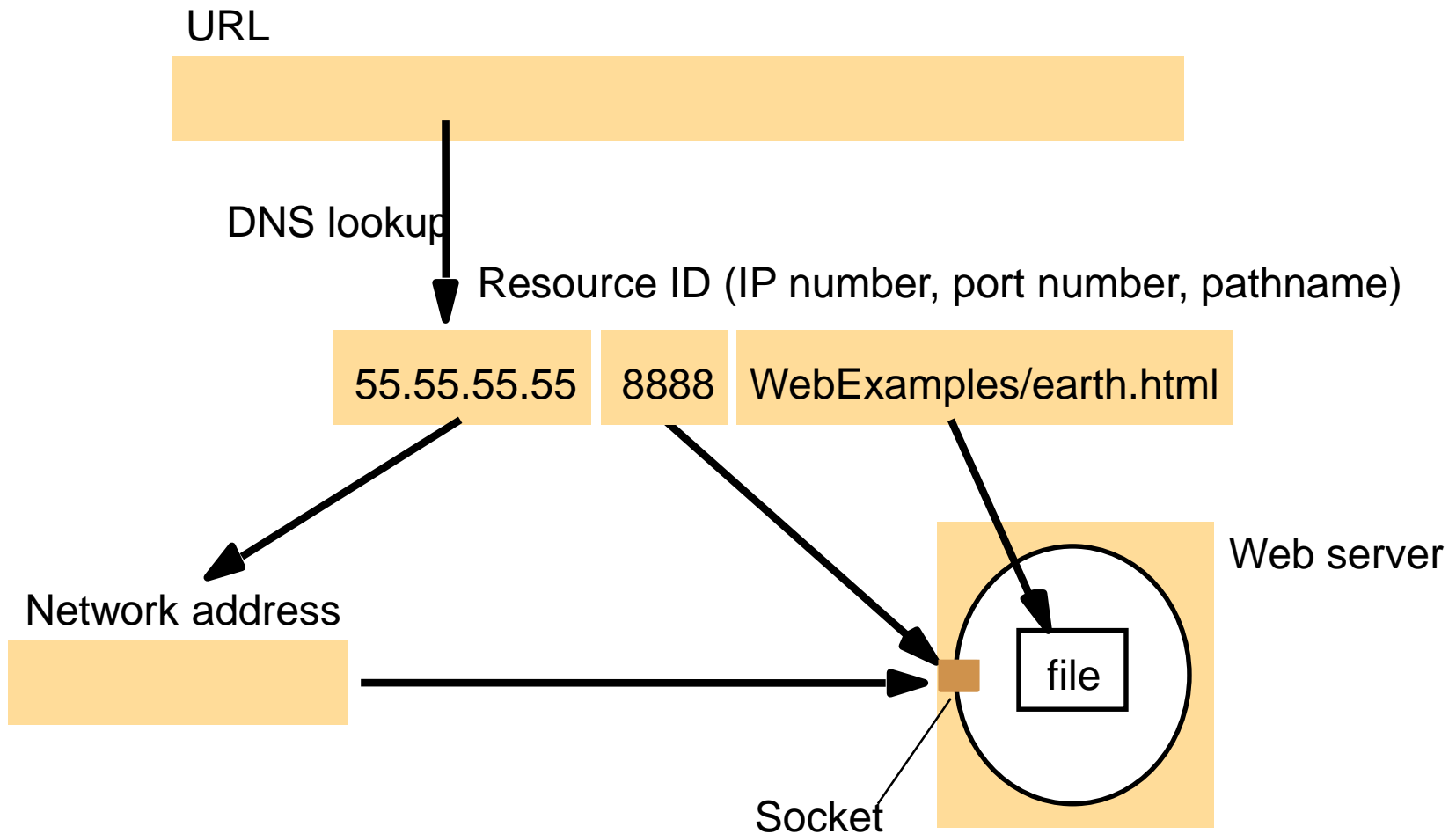


*From* **Coulouris, Dollimore and Kindberg**  
**Distributed Systems:**  
**Concepts and Design**

Edition 4, © Pearson Education 2005

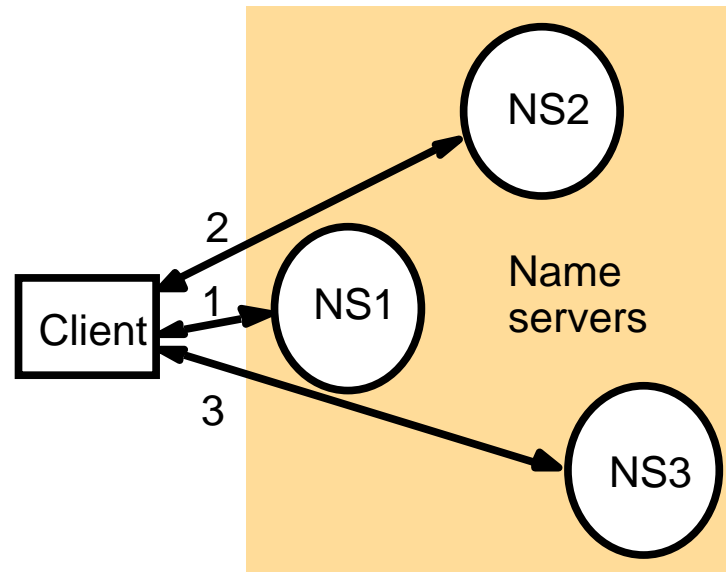
Figure 9.1

Composed naming domains used to access a resource from a UR



## Figure 9.2

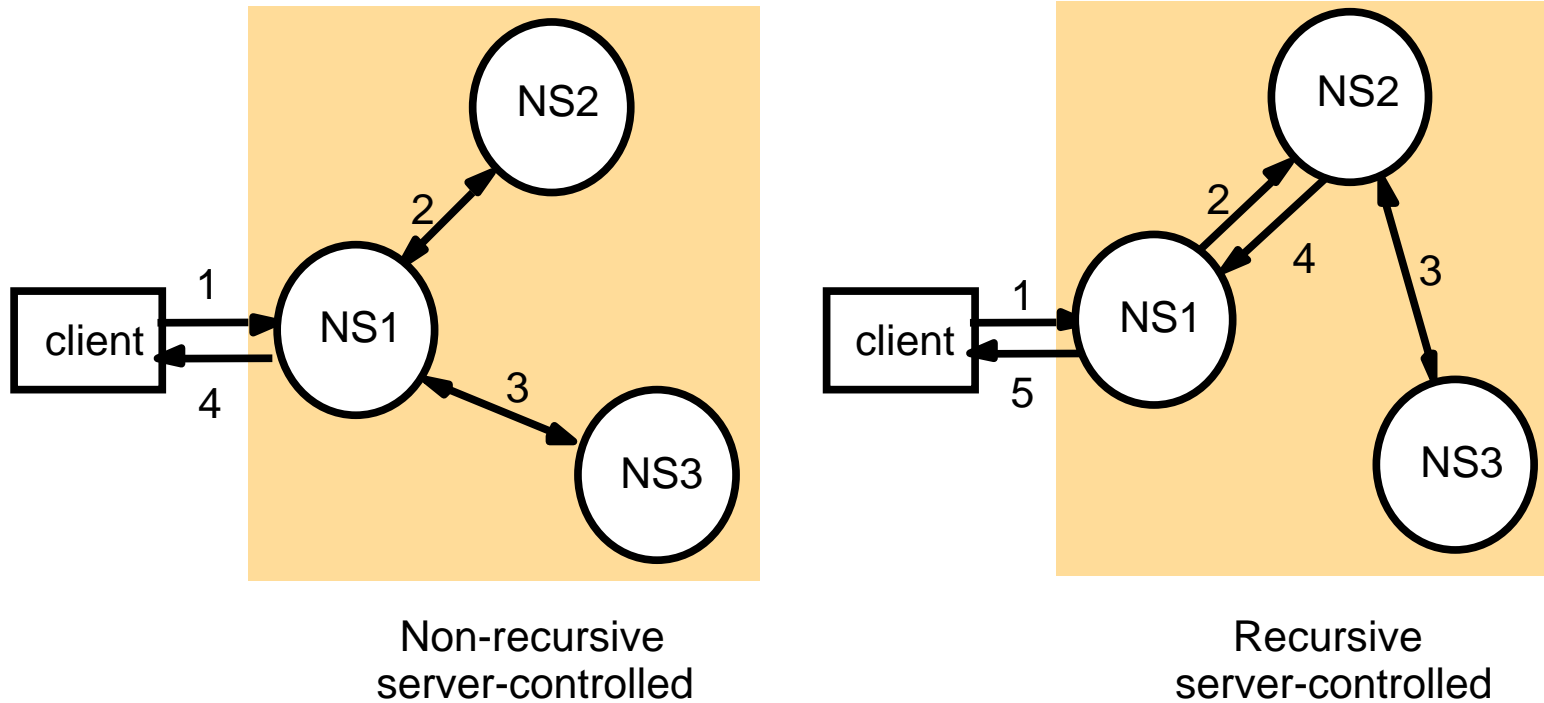
### Iterative navigation



A client iteratively contacts name servers NS1–NS3 in order to resolve a name

## Figure 9.3

### Non-recursive and recursive server-controlled navigation



A name server NS1 communicates with other name servers on behalf of a client

## Figure 9.4

### DNS name servers

*Note:* Name server names are in italics, and the corresponding domains are in parentheses.

Arrows denote name server entries

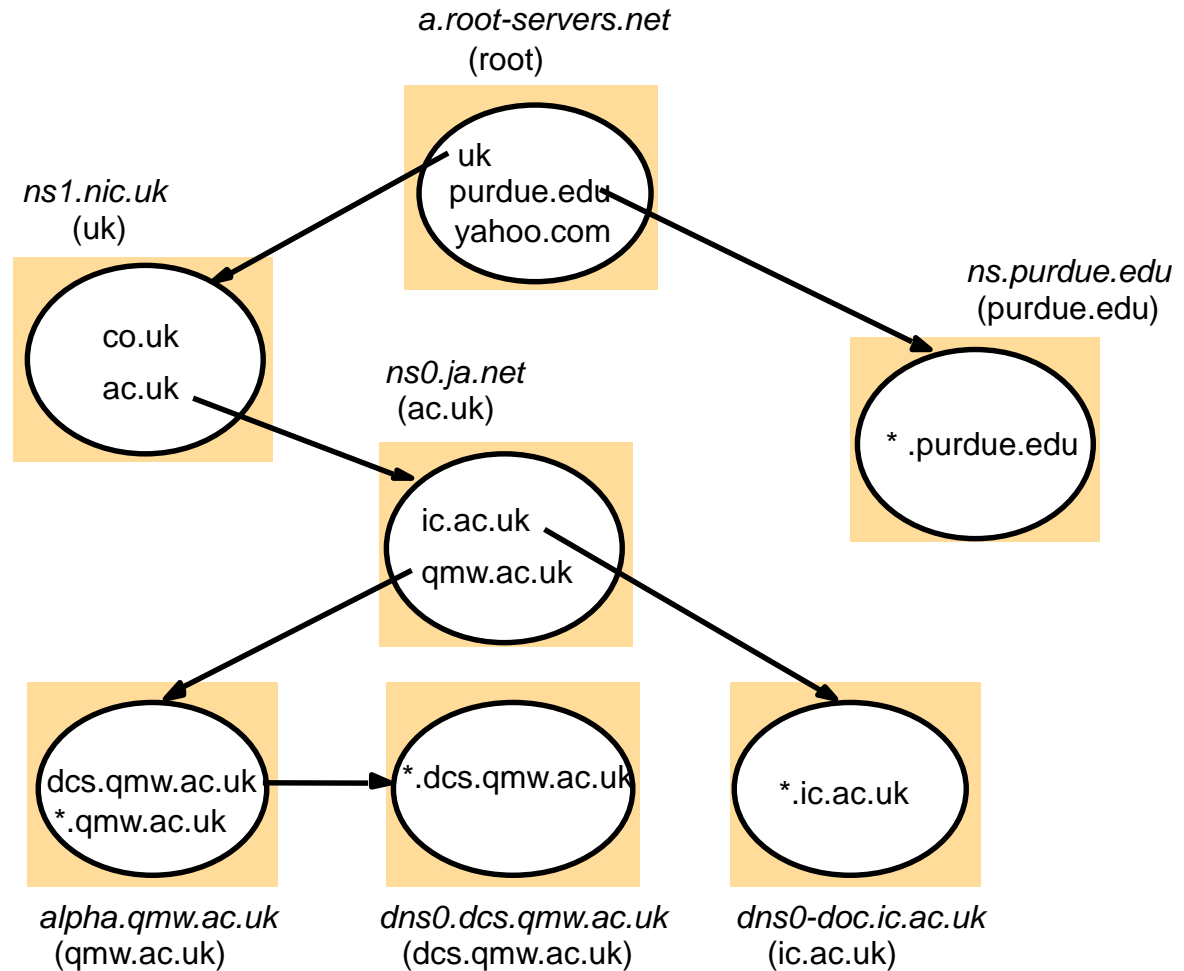


Figure 9.7  
GNS directory tree and value tree for user Peter.Smith

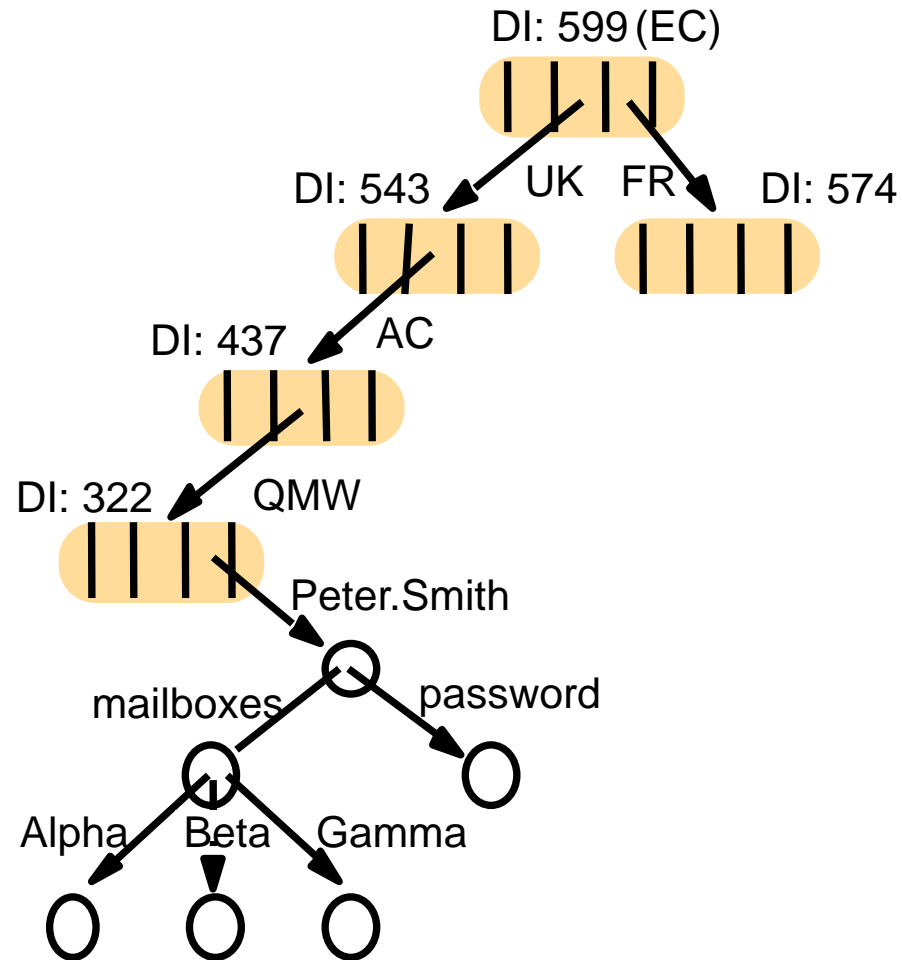
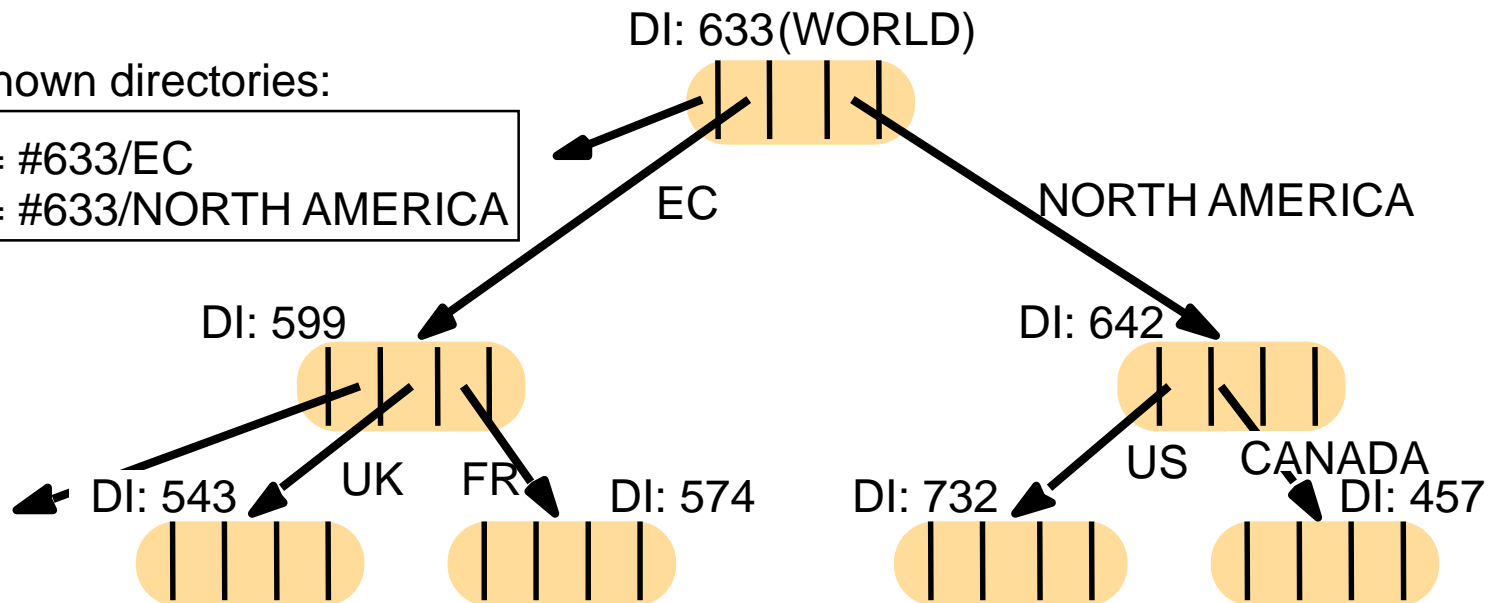


Figure 9.8  
Merging trees under a new root

Well-known directories:

#599 = #633/EC

#642 = #633/NORTH AMERICA



## Figure 9.9

### Restructuring the directory

Well-known directories:

#599 = #633/EC

#642 = #633/NORTH AMERICA

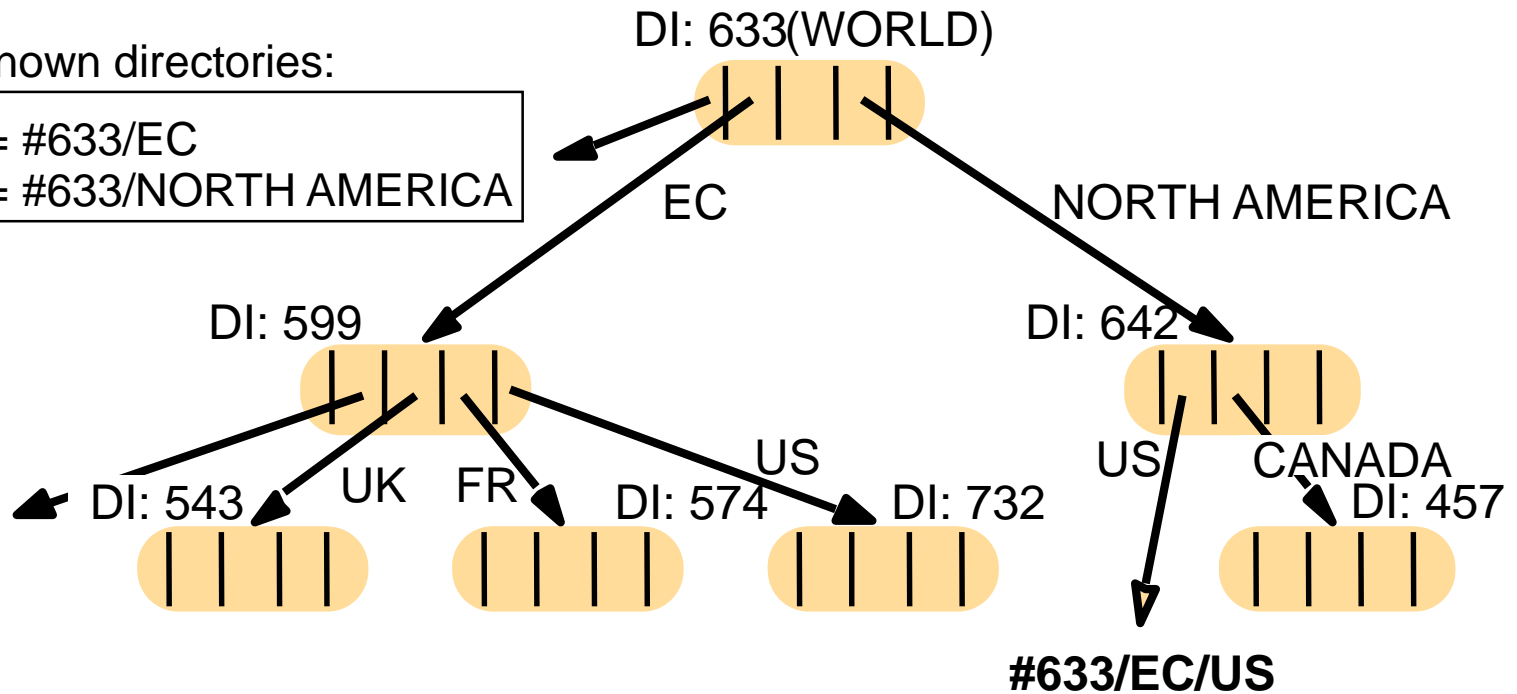




Figure 9.10  
X.500 service architecture

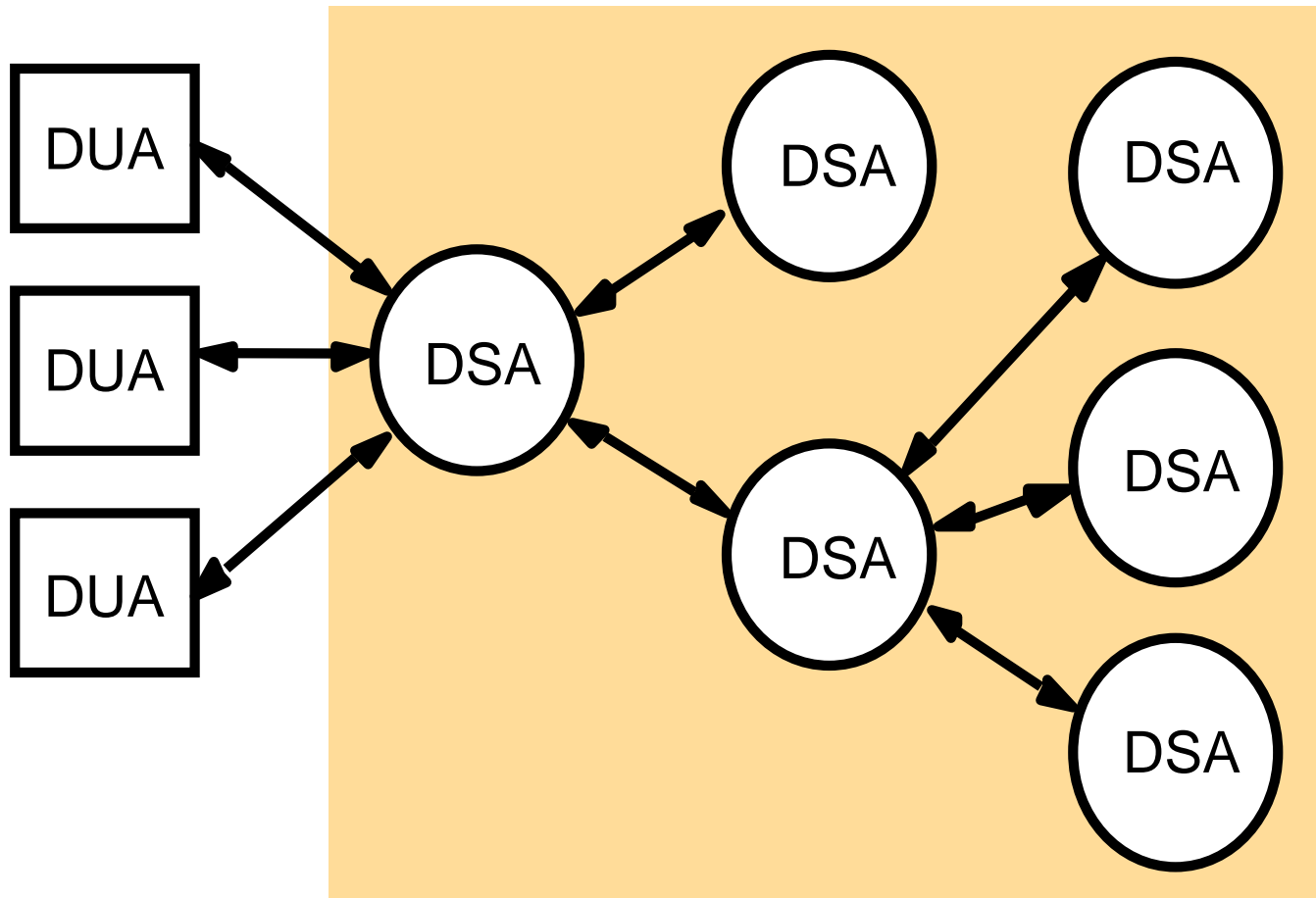
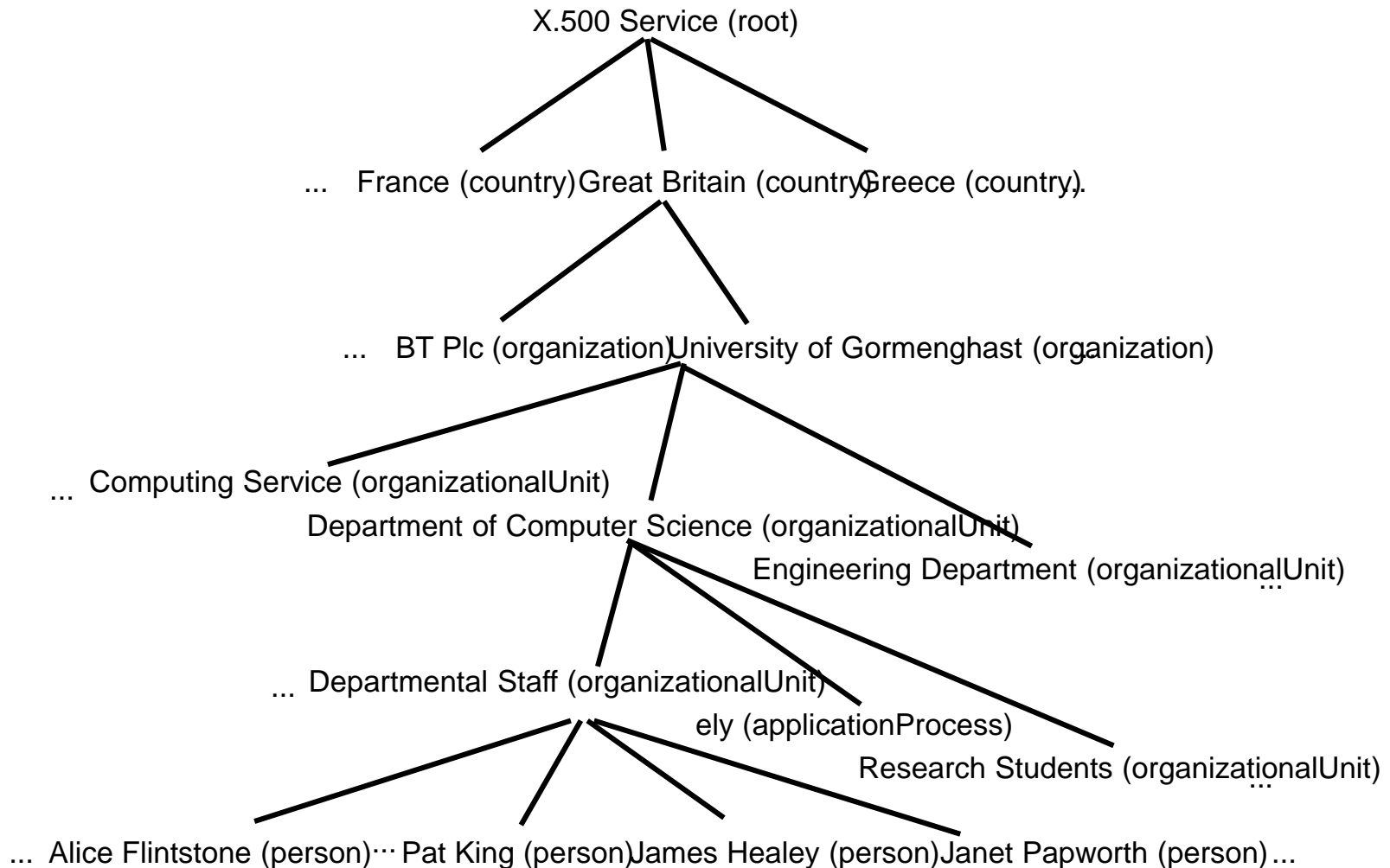


Figure 9.11  
Part of the X.500 Directory Information Tree



## Figure 9.12

### An X.500 DIB Entry

---

*info*

Alice Flintstone, Departmental Staff, Department of Computer Science,  
University of Gormenghast, GB

*commonName*

Alice.L.Flintstone  
Alice.Flintstone  
Alice Flintstone  
A. Flintstone

*uid*

alf

*mail*

alf@dcs.gormenghast.ac.uk

*surname*

Flintstone

Alice.Flintstone@dcs.gormenghast.ac.uk

*roomNumber*

Z42

*telephoneNumber*

+44 986 33 4604

*userClass*

Research Fellow

---