Distributed Systems

Part 2, Part 2 (General) and Diploma, Easter term 2005

Jean Bacon (jmb@cl.cam.ac.uk)

Preamble	pages 1-10
Introduction	
fundamental characteristics	Ι
software structure	
evolution	
models, architecture, engineering	
Domain-structured large-scale systems	1-8
Time	Т
event ordering	1
physical clock synchronisation	
process groups	
ordering message delivery	
Distributed algorithms and protocols	D
strong and weak consistency	D
replicas of an object, transactions on distributed objects	
concurrency control	
atomic commitment	
election algorithms	
distributed mutual exclusion	
Middleware	1 20
RPC, OOM, MOM, event-based middleware	1-29 1-14
Event-Based Middleware - case study	1-14
Naming	Ν
Access Control	Α
capabilities, ACLs, RBAC and access control policy	1 1
OASIS RBAC case study	
Storage services	S
distribution issues, outline of Cambridge File Server	5