

MM9122 MULTIMEDIA SERVER MANAGEMENT

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UNIT I MULTIMEDIA SERVER APPLICATIONS AND ENVIRONMENTS 9

Introduction - multimedia server environment – requirements – client environment – network environment - ATM model - multimedia server architecture and components – hardware – software – server topology.

UNIT II SCHEDULING 9

Client Session Scheduling – QoS specification – capacity estimation – logical channel setup – client request Scheduling – client scheduling issues – VCR control operations – batching policies – time-varying workloads - scheduling in system components.

UNIT III THE STORAGE SUB SYSTEM 9

Storage management overview – storage system architecture – placement of multimedia data in storage devices – retrieval – issues in I/O scheduling - single disk issue - multiple disk organization – NAS architecture – management – SAN architecture – management – issues - storage hierarchy.

UNIT IV CACHE MANAGEMENT 9

Caching overview – objectives – data prefetching - relationships to buffering and caching – cache management policies - memory cache – caching policies - caching among disks - distributed disk caching - storage networks - management of storage networks.

UNIT V RELATED ISSUES 9

Performance evaluation - affinity routing - load balancing – network backup services – back up clients - performance gains as a result of network backups –deadline driven scheduling & unconstrained data placement - fault tolerance issues in media servers.

TOTAL = 45

TEXT BOOKS

1. Dinker Sitaram, Asit Dan, “Multimedia Servers - Applications, Environments and Design”, Morgan Kaufmann Publishers, 2000.
2. Ali Dashti, Seon Ho Kim, Cyrus Shahabi, and Roger Zimmermann “Streaming Media Server Design”, IMSC Press Multimedia Series, 2003.
3. Ulf Troppens, Rainer Erkens, Wolfgang Müller, and Rachael Waddington, “Storage Networks Explained: Basics and Application of Fibre Channel SAN, NAS iSCSI and InfiniBand”, John Wiley and sons, 2004.

REFERENCES

1. W.Curtis Preston, “Using SANs and NAS”, O’Reilly Media, Inc., 2002.
2. S. Ghandeharizadeh, S. Kim, C. Shahabi and R. Zimnorman, “Multimedia Information Storage Management”, Kluwer Academic Press, 1996.
3. C. K. Wong, “Algorithmic Studies in mass Storage Systems”, Computer Science Press, New York, 1983.