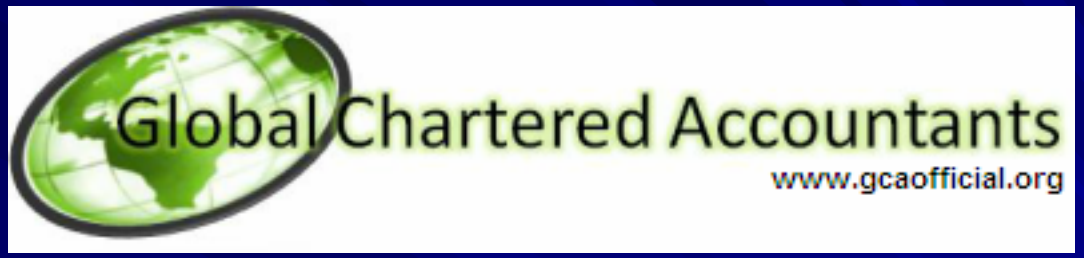
Chapter No. 4



IT Service Delivery and Support

HARWARE REVIEWS : (P-272)

- ***Capacity management***
  - ***Continuous review of HW and SS performance and capacity***
  - ***Performance monitoring is based on historical data and IS trouble log, Processing, Schedules, Job Accounting system reports, Preventive maintenance schedules and reports.***
- ***Hardware acquisition:***
  - ***Plan is compared regularly to management's business plans***
  - ***If environment is adequate for current and new installations***
  - ***Technical Obsolescence of existing and new HW***
  - ***Proper Documentation***

HARWARE REVIEWS :

- ***PC Acquisition Criteria***
  - ***Policy regarding acquisition of usage of PC***
  - ***Criteria and procedure for approval and acquisition of PC***
  - ***Supporting of cost benefit analysis***
  - ***Acquisition through IS purchasing to take advantage of volume discount and quality***
- ***Review change Management Controls for :***
  - ***Timely instructions to personnel to change HW configuration***
  - ***Allowance of adequate time for installation and testing of HW.***
  - ***Selection of Sample of HW change and procedure***
  - ***Ascertain that HW change is communicated to all concerned.***
  - ***Effectiveness of change so it do not interfere normal course of production / action***

OPERATING SYSTEM REVIEWS : (p-273)

During Auditing of Operating Software Development, acquisition or maintenance, the following approaches may be adopted

- ***Interview Technical Services :***
  - **Regarding Approval Process, Test Procedures, Implementation Process and documentation requirements**
- ***System Software selection procedures:***
  - ***Include IS processing and control requirements, software's capabilities and control options***
- ***Feasibility and selection process:***
  - ***Consistent proposed Sys Objectives and purposes. Same Criteria for all proposals***

OPERATING SYSTEM REVIEWS :

- ***Review Cost/Benefit analysis:***
  - ***For Direct Financial cost, Maintenance, requirement and capacity of HW., Training and technical support, Impact on Data Security***
- ***Review controls over installation of changed System Software:***
  - ***That all levels of software has been implemented, least impact on IS processing, tests are completed, debugging, assurance of problem resolution***
- ***Review of Maintenance Activities:***
  - ***Ensure that changes in Sys Software are documented and support of vendor for latest version***

OPERATING SYSTEM REVIEWS :

- ***Sys Software change Controls:***
  - ***Controlled access of Libraries to concerned individuals, Changes must be documented and test before implementation. Proper approval to convert testing mode to production***
- ***Review of System Documentation:***
  - ***For Installation control statement, Parameter tables, Exit conditions, activity Logs/report***
- ***Test control during Implementation of SS :***
  - ***Change Procedures, Authorization procedures, Access security features, documentation requirement, audit trail, Access control over the software in production***

OPERATING SYSTEM REVIEWS :

- ***Review Authorization documentation:***
  - ***Additions, deletion, or changes authorization has been documented. And attempted violation is reported***
- ***Review System Software security:***
  - ***Logical security Access controls are safe to be circumvent. Procedures to limit the access system interrupts, Security provided by Software. Physically security of master console***
- ***Database supported IS controls to find:***
  - ***Data Access and organization should be appropriate, Change procedures to ensure integrity. Data dictionary is maintained, Data redundancy is minimized.***

DATABASE REVIEWS : (p-274)

- ***Design:***
  - ***Database model is verified, identified primary and foreign keys. Logical schema including entities and their relationship. Physical Schema including tables, logs, indexes are reviewed.***
- ***Access:***
  - ***Indexes are used to have efficient access to the required data.***
- ***Administration:***
  - ***Security levels for users and their roles are well justified Backup and recovery procedures established. Adequate handling for consistency and integrity concurrent accesses***

DATABASE REVIEWS :

- ***Interfaces:***
  - ***Integrity and confidentiality of data during interfacing with other systems.***
- ***Portability:***
  - ***Structured query language (SQL) is used as much as possible***

LOCAL AREA NETWORK REVIEWS : (275)

- ***Physical controls:***
  - ***Physical controls should protect the LAN hardware and access point to the LAN by limiting access to authorized personnel only .***
    - ***LAN Hardware devices, Wiring closet, cabling***
    - ***Keys to the LAN file Server***
    - ***LAN files server locking and prevention.***
- ***Test of Physical Controls:***
  - ***Check the all of above factors***

LOCAL AREA NETWORK REVIEWS :

- ***Environmental Controls:***
  - ***Static Electricity /surges***
  - ***Power Supply controls***
  - ***UPS***
  - ***Free of Dust, , smoke, and food, Humidity***
- ***LAN Logical Security***
  - ***Unique encrypted Passwords***
  - ***Written Authorization***
  - ***Automatic disability of un-used display for a time***
  - ***Logon attempts Log***
  - ***Information about communication line connected***
- ***Test of Logical Security:***

NETWORK OPERATING CONTROL REVIEWS :

- *In DDP network there should be appropriate implementation, conversion and acceptance test plans*
- *Test plans for networks hardware communication*
- *Ensuring consistency with Laws governing transmission of data*
- *Identified the sensitive files/databases and their security*
- *Restart and recovery mechanism*
- *Assurance of minimum effect due to any failure*
- *Changes in OS at user site should be controlled by IS Management*
- *Access to only allowed applications and data*
- *Encryption is being used for sensitive data*
- *Security policies are implemented at following applied environment :*
  - *Highly Distributed*
  - *Distributed*
  - *Mixed*
  - *Centralized*
  - *Highly Centralized*

IS OPERATION REVIEW : (p-276)

- ***Computer Operations :***
  - ***Restricting Operators Access capabilities to :***
    - ***Libraries***
    - ***Limited peripheral-equipment***
    - ***Correcting programs***
    - ***System fixes Production Source code, data Libraries***
  - ***Scheduling :***
    - ***Recording of jobs***
    - ***Processing are on a predetermined basis***
    - ***Exception processing***
    - ***Executing***
  - ***Identified the sensitive files/databases and their security***
  - ***Restart and recovery mechanism***
  - ***Assurance of minimum effect due to any failure***
  - ***Re-run handling***

IS OPERATION REVIEW :

- ***Files handling procedure :***
  - ***Control the receipt and release of files and storage media to/from other locations***
  - ***Audit procedure should include review of these procedures that are in line of management's intent and authorization***
- ***Data Entry Control :***
  - ***Authorization of input documents***
  - ***Reconciliation of totals.***
  - ***Segregation of duties***
  - ***Auditing of above controls and in addition the production and review Control reports and their accuracy and completeness.***

LIGHT-OUT OPERATIONS :

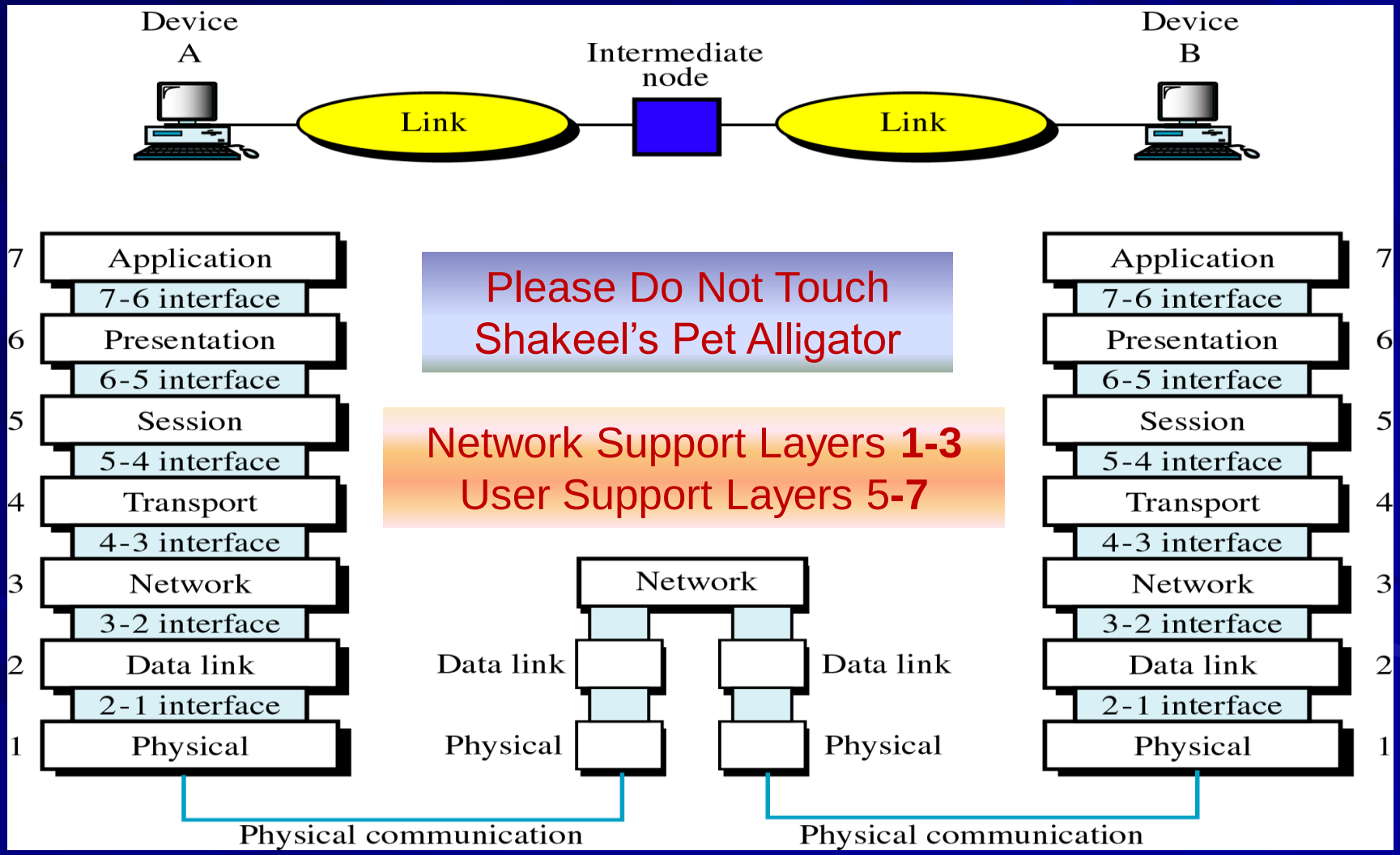
- **Remote Access :**
  - Secure and leased line/dial-back should be used for extensive access security to the remote terminal in case of contingency
  - Contingency plan for proper identification of disaster and its test
  - Program Change controls and access controls and its periodical test
  - Error should not be hidden by software

PROBLEM MANAGEMENT REPORTING REVIEWS

- Interview with IS operations personnel (p-278)
- Procedures to record, evaluate and resolve or escalate problems
- Performance records
- Review of reasons of delay in processing by Application Software
- Review of procedure of collecting on-line processing performance
- Establishment of procedure handling data processing handling problems
- Assurance of resolution of all identified problems
- Prevention from recurring problems
- Resolution of problems in timely and complete manner
- IS management reporting produced by problem management system as evidence of proper review
- Outstanding error logs
- Documentation of developed escalation procedures

The OSI Model (p-252)

A layered framework for the design of network systems that allows communication across all types of computer systems regardless of their underlying architecture



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