

STATUS OF THE LICENSING SUPPORT SYSTEM

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A FEW FACTS ABOUT THE LICENSE APPLICATION

- AN ESTIMATED 25 MILLION PAGES OF PROGRAM DOCUMENTATION WILL BE GENERATED BY 1995; 40 MILLION BY 2003
- REVIEWERS AND INTERESTED PARTIES WILL BE LOCATED THROUGHOUT THE U.S.
 - o TECHNICAL o LEGAL o PUBLIC
 - o REGULATORY o MANAGEMENT
- A GOOD PROPORTION OF LICENSE HEARING TIME IS CONSUMED WITH THE LEGAL DOCUMENT DISCOVERY PROCESS AND IN MOTIONS PRACTICE

HENCE A PROCESS WAS NEEDED TO SHORTEN DISCOVERY AND FACILITATE DOCUMENT TRANSMISSION

MAGNITUDE OF THE LSS

. . . . GIGABYTES

<u>YEAR</u>	<u>PAGES</u>	<u>BIBLIOGRAPHIC DATA/INDICES</u>	<u>ASCII TEXT/ INDICES</u>	<u>BIT-MAPPED IMAGES</u>
1990	12,000,000	15	32	260
1994	22,000,000	18	126	1,000
1998	28,000,000	25	175	1,400

350-450 WORKSTATIONS

10 YEAR LIFE-CYCLE COST ESTIMATED \$200 MILLION

GENERAL CAPABILITIES OF THE LSS

- **HARDWARE AND SOFTWARE COMPONENTS**
 - o **CENTRALIZED TEXT AND IMAGE STORAGE IN LAS VEGAS**
 - o **SIX GEOGRAPHICALLY DISTRIBUTED CAPTURE SYSTEMS**
- **HEADERS AND SEARCHABLE FULL TEXT OF ALL APPROPRIATE DOCUMENTS**
 - o **RETRIEVAL THROUGH STRUCTURED INDEX SEARCHING TIED TO IMAGES**
- **ELECTRONIC MAIL**
 - o **SUPPORT COMMUNICATIONS AND MOTIONS PRACTICE**

GENERAL CAPABILITIES OF THE LSS (CONTINUED)

- **DEMAND PRINTING FROM IMAGES TO PRODUCE**
 - o **ESTIMATED 10 MILLION PAGES A YEAR**
 - o **OVERNIGHT DELIVERY ADEQUATE FOR LARGE DOCUMENTS**
 - o **LOCAL PRINTING FOR SMALL DOCUMENTS**
 - o **LEAST COST SOLUTION**

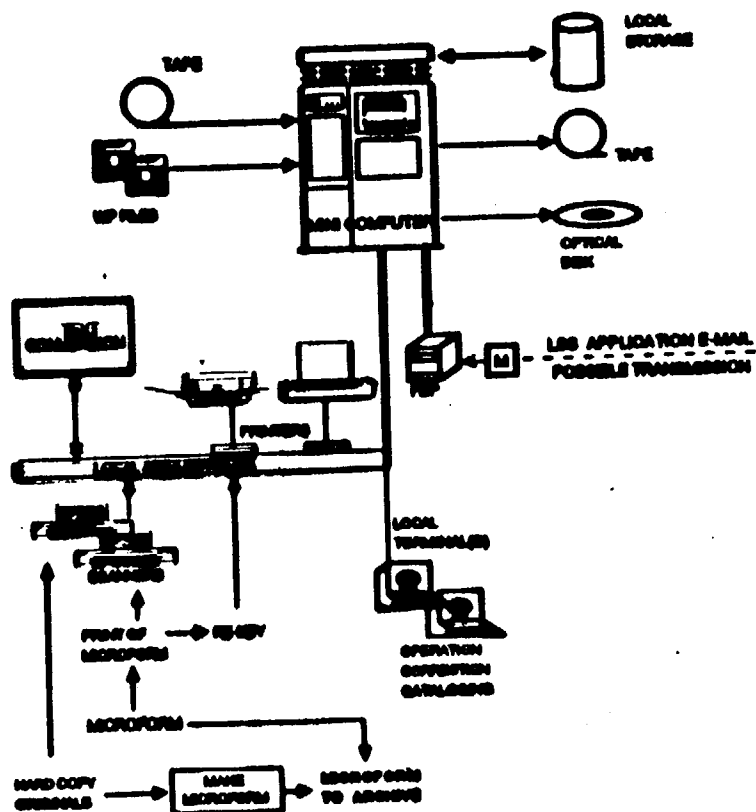
- **LOCAL DISPLAY OF DOCUMENTS ON HIGH RESOLUTION WORKSTATIONS**
 - o **GRAPHIC DISPLAY**
 - **DATA; MAPS; DRAWINGS**

 - o **REVIEW OF ORIGINAL PAGES**
 - **ESSENTIAL SINCE OPTIMIZING FULL TEXT SEARCH
CHANGES FORM OF PAGES**

 - **SHOWS COPY OF ORIGINAL SIGNATURE**

BASE CONCEPTUAL DESIGN HARDWARE ARCHITECTURE

CAPTURE SYSTEM



6 CAPTURE STATIONS

MINI COMPUTER BASE (3 MIPS)
LAN COMMUNICATIONS
3000 PAGES/DAY CAPACITY
FUNCTIONALITY
 SCAN
 MICROFILM
 CATALOGING
 TEXT CONVERSION

LOCATIONS

DOE FORRESTAL
 DOE LAS VEGAS
 NRC WHITE FLINT
 ?

BASE CONCEPTUAL DESIGN HARDWARE ARCHITECTURE

WORKSTATIONS

LEVEL 1

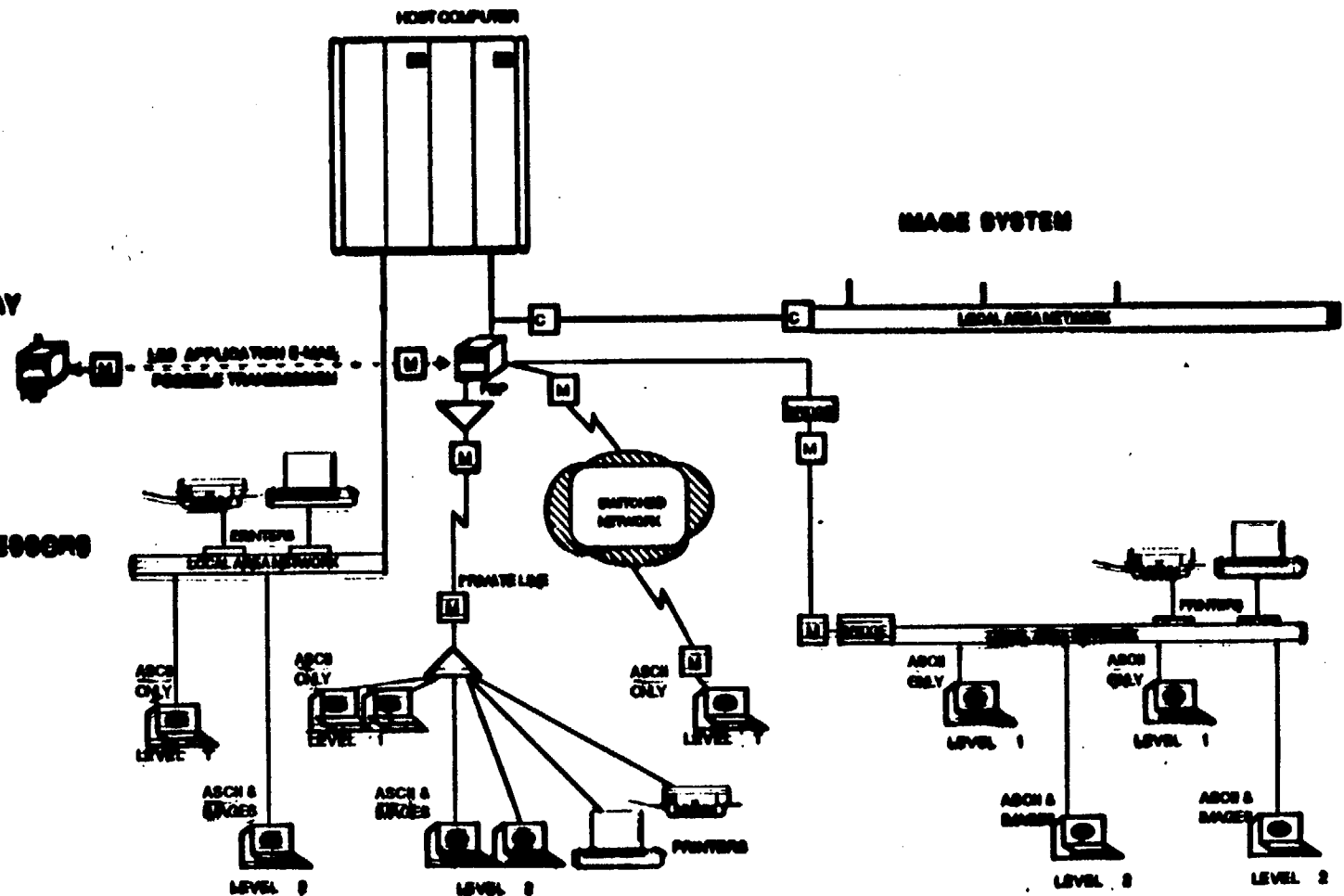
ASCH ONLY
USER SUPPLIED PC

LEVEL 2

ASCH AND IMAGE
PC BASE
HIGH RESOLUTION DISPLAY

TELECOMMUNICATIONS

LANs
LAN BRIDGES
MULTIPLEXERS
MODEMS
COMMUNICATIONS PROCESSORS

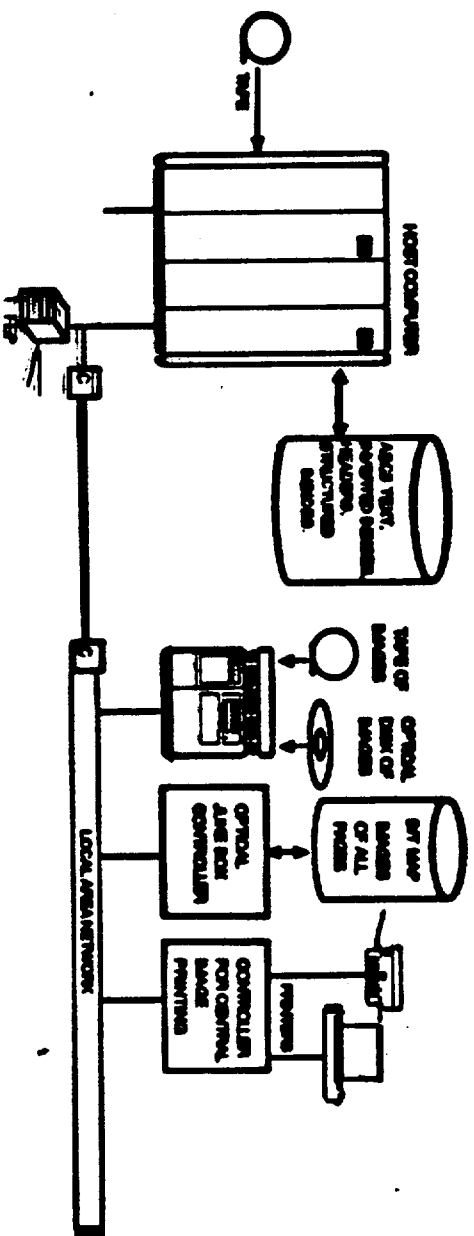


BASE CONCEPTUAL DESIGN HARDWARE ARCHITECTURE

SEARCH SYSTEM

IMAGE SYSTEM

LOCATION:
LAS VEGAS



SEARCH

MAINFRAME OR MINICOMPUTER (66 MIPS)
SUPPORT FOR 100 SIMULTANEOUS USERS
STORAGE FOR 200 GIGABYTES (HEADERS & TEXT)
FUNCTIONALITY
FULL TEXT SEARCH
HEADER SEARCH
USER ASSISTANCE
ELECTRONIC MAIL

IMAGE

MINICOMPUTER (8 MIPS)
STORAGE FOR 1400 GIGABYTES (ALL PAGES)
FUNCTIONALITY
ON LINE IMAGE DISPLAY
HARD COPY PRODUCTION

SCHEDULE FOR THE LSS

**OCTOBER, 1987 DESIGN AND IMPLEMENTATION CONTRACT AWARDED TO
SCIENCE APPLICATIONS INTERNATIONAL, INC.**

1988 - INFORMATION ENGINEERING PHASE

- NEEDS ANALYSIS**
 - o NEGOTIATED RULEMAKING**
 - o SURVEY OF USERS**
- DATA SCOPE-ANALYSIS**
- CONCEPTUAL SYSTEM DESIGN**
- COST-BENEFIT ANALYSIS**
- PROTOTYPE SPECIFICATION**

THE PROTOTYPE PLAN

- **DEVELOP AN INSTRUMENTED TEST BED WHICH WILL**
 - o **CONTAIN 200,000 PAGES OF REPRESENTATIVE FULL TEXT, IMAGES AND HEADER INFORMATION**
 - o **PROVIDE EXPERIENCE WITH SCANNING AND CAPTURE, OCR, STORAGE AND RETRIEVAL OF IMAGES AND FULL TEXT**
 - o **UTILIZE EXISTING HARDWARE AND SOFTWARE**
- **MONITOR AND ANALYZE RETRIEVAL SESSIONS FOR USAGE GROUPS**
 - o **REQUEST ASSISTANCE AND INPUT FROM TECHNICAL SUBCOMMITTEE TO HIGH LEVEL WASTE ADVISORY PANEL**
- **DETERMINE SYSTEM DESIGN SPECIFICATIONS**
 - o **WEIGH COST & PERFORMANCE FEASIBILITY AGAINST USER BEHAVIOR**
 - o **DEVELOP HARDWARE AND SOFTWARE SPECIFICATIONS**

SCHEDULE FOR THE LSS (CONTINUED)

- 1989 - DESIGN AND INITIAL PROCUREMENT**
- PROTOTYPE IMPLEMENTATION OF 200,000 PAGES**
 - CAPTURE SYSTEM SPECIFICATIONS**
 - INSTALLATION OF FIRST CAPTURE SYSTEM**
 - o BEGIN WITH DOE BACKLOG LOAD**
 - WORK WITH NRC AND OTHERS**
 - o STANDARD CAPTURE PROCEDURES**
 - o COORDINATION OF CAPABILITIES WITHIN
 EXISTING ENVIRONMENT**

SCHEDULE FOR THE LSS (CONTINUED)

1990

- **PROCUREMENT AND INSTALLATION**
 - **DATABASE MANAGEMENT SYSTEM PROCUREMENT**
 - **REMAINING CAPTURE SYSTEMS PROCUREMENT**
 - o **BEGIN DOCUMENT COLLECTION FOR NRC AND OTHERS**
 - **SEARCH SYSTEM SPECIFICATIONS**
 - **IMAGE SYSTEM SPECIFICATIONS**
 - **COMPONENT REVIEW AND ACCEPTANCE BY DOE, NRC AND OTHERS**

SCHEDULE FOR THE LSS (CONTINUED)

- 1991** - **PROCUREMENT, INSTALLATION, INTEGRATION**
- SEARCH AND IMAGE SYSTEM PROCUREMENT AND INSTALLATION
 - SOFTWARE DEVELOPMENT COMPLETED
 - TELECOMMUNICATIONS INSTALLED
 - COMPONENT REVIEW AND ACCEPTANCE BY DOE, NRC AND OTHERS
- 1992** - **FINAL SYSTEM INTEGRATION**
- TEXT OF 4 MILLION PAGES LOADED
 - INSTALLATION AND ACCEPTANCE TESTS COMPLETED
 - LSS AVAILABLE TO USERS
- 1993** - **MAJORITY OF BACKLOG DATA LOADED BY ALL PARTIES**
- 1994** - **CERTIFICATION BY NRC THAT LSS IS "SUBSTANTIALLY LOADED"**