REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER N/A	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Performance Test Plan (PTP) for Task 81-3. Air Force Automated Message Processing Exchange (AFAMPE) Requirements and System Analysis		5. TYPE OF REPORT & PERIOD COVERED Draft Report
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s)		8. CONTRACT OR GRANT NUMBER(s) F23613-77-D-0011
9. PERFORMING ORGANIZATION NAME AND ADDRESS Computer Sciences Corporation 6565 Arlington Boulevard Falls Church, Virginia 22046		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS N/A
11. CONTROLLING OFFICE NAME AND ADDRESS Air Force Automated Systems Project Office Directorate of Sys Eng for I-S/A AMPE Bldg 607 Gunter AFS AL 36114		12. REPORT DATE 9 April 1982
		13. NUMBER OF PAGES 55
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Distribution A. Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Test Strategy
Test Data Requirements
Hardware Requirements
Performance Evaluation Criteria

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Computer Sciences Corporation (CSC), under contract number F23613-77-D-0011, AFCC SETA Task 81-3, had been tasked to design a Performance Test Plan (PTP) for the Air Force Automated Message Processing Exchange (AFAMPE) system. The objective of this document is to present a performance test methodology to measure system throughput characteristics of the AFAMPE. The development of the test methodology presented in this report is a follow-on phase to the information and conclusions presented in the final report to the AFAMPE Performance Analysis and Test Criteria, dated 26 February 1982.

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This document encompasses the test approach methodology, test scenarios, and test management plan and consists of three sections as follows: Section 2 contains a conceptual description of the test methodology, test data requirements, test hardware requirements, test results, and performance evaluation criteria. Section 3 is made up of instructions for pre-test preparations and instructions for conducting the scenarios that make up the test methodology. Section 4, the management plan, defines responsibilities, and describes the test schedule, controls, and reporting requirements,

PERFORMANCE TEST PLAN (PTP)

FOR
TASK 81-3
AIR FORCE AUTOMATED MESSAGE
PROCESSING EXCHANGE (AFAMPE)
REQUIREMENTS AND SYSTEM ANALYSIS

DRAFT REPORT

Prepared for

U.S. AIR FORCE COMMUNICATIONS COMMAND

SCOTT AIR FORCE BASE, ILLINOIS

Under

CONTRACT F23613-77-D-0011

9 April 1982

COMPUTER SCIENCES CORPORATION

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SECTION 1 - INTRODUCTION

1.1 PURPOSE

Computer Sciences Corporation (CSC), under contract number F23613-77-D-0011, Task 81-3, from the U.S. Air Force Communications Command (AFCC), Scott Air Force Base, for the Phase IV Project Management Office (PMO), has been tasked to design a Performance Test Plan (PTP) for the Air Force Automated Message Processing Exchange (AFAMPE) system. The objective of this document is to present a performance test methodology to measure system throughput characteristics of the AFAMPE. The development of the test methodology presented in this report is a follow-on phase to the information and conclusions presented in the final report to the AFAMPE Performance Analysis and Test Criteria, dated 26 February 1982. As part of the certification process the PMO must present documented throughput performance results to Defense Communications Agency (DCA) for evaluation. The methodology presented in this document will not only meet this requirement but will also establish baseline performance characteristics for future implementation of the AFAMPE system at other sites.

1.2 SCOPE

This document encompasses the test approach methodology, test scenarios, and test management plan and consists of three sections as follows: Section 2 contains a conceptual description of the test methodology, test data requirements, test hardware requirements, test results, and performance evaluation criteria. Section 3 is made up of instructions for pre-test preparations and instructions for conducting the scenarios that make up the test methodology. Section 4, the management plan, defines responsibilities, and describes the test schedule, controls, and reporting requirements.

1.3 RELATED DOCUMENTS

Throughout this document the following references should be used as sources of additional information:

1. Final Report of the AFAMPE Performance Analysis and Test Criteria; CSC; prepared for AFCC, Scott Air Force Base, Illinois; 26 FEB 82.

2. AFAMPE Operators Manual; AFCC and AFCCPC; 4 SEP 81.

3. Task Analysis and Plan for the AFAMPE; CSC; prepared for AFCC, Scott Air Force Base; Illinois, 4 SEP 81.

SECTION 2 - PERFORMANCE TEST METHODOLOGY

A rigorous and methodical testing approach is necessary to
exercise the AFAMPE against the requirements established in the
Performance Analysis and Test Criteria. This section presents a
detailed explanation of the performance test methodology for the
AFAMPE.

2.1 GENERAL TEST STRATEGY

The objective of the methodology delineated is to measure
system throughput performance for the AFAMPE. Throughput is
defined as the AFAMPE·system's ability to process message line
blocks at a given rate. Message line block processing is further
defined as the system's ability to receive a line block at its
input point and perform whatever handling is necessary to deliver
related line blocks (complete messages) to the end customer.
Thus, in measuring throughput for certification purposes this
methodology encompasses, or attempts to measure, overall system
performance as opposed to partial performance or performance at
the system function level. This testing methodology is conceptual
and modular in design. These characteristics make this strategy
transportable and well suited for rigorous testing of subsequent
AFAMPE implementations independent of new systems hardware
configurations.

The AFAMPE throughput performance test has been designed as a
two step test approach. However, the fact that the entire test
cycle consists of two phases does not imply that the first phase
should be performed before the second phase. The entire test
procedure has been broken down into two steps for organizational
purposes only. Individual test units within each phase may be
performed separately and in any given order. Consequently, it is
not the testing order that's important but the correlation of the
results during the analysis stage. Of equal importance is the

assurance that all the tests are conducted. Table 2-1 provides a summary of test scenarios and system configurations. Test phases are further detailed in the following paragraphs.

o   Phase 1. The objective of this phase is to establish individual circuit baseline performance criteria. This objective is accomplished by measuring each major input to the AFAMPE as a stand-alone unit isolated from the system overhead involved in handling more than one input. This phase consists of a series of modular tests. All tests are similar to each other in that they measure the system's ability to process the input stimulus of only one line or circuit at a time. Test scenarios diverge from each other in the circuit being measured. A typical test scenario within this phase configures the test bed as a two processor system with one 4800 baud Autodin Switching Center (ASC) line. During the conductance of this test idle CPU utilization measurements are taken. Stimuli are applied to the processor via the 4800 baud ASC circuit and CPU utilization measurements are again recorded at 1 minute intervals. In addition to these measurements there will also be software based monitors to record the time a given stimulus arrives at the system and the time the system delivers the stimulus to the end customer.

o   Phase 2. This phase measures and records system wide performance behavior for a variety of system loads and consists of several test scenarios. Each test scenario has been designed with the proper mix of processors and input devices to simulate certain conditions that the AFAMPE is expected to experience under an operational situation. It should be noted that the scenarios have

Table 2-1. AFAMPE Test Scenario Matrix

	Scenario #1	Scenario #2	Scenario #3	Scenario #4	Scenario #5	Scenario #6	Scenario #7	Scenario #8	Scenario #9	Scenario #10	Scenario #11	Scenario #12	Scenario #13
ASC #1	X	X				X	X	X	X	X	X	X	X
ASC #2		X				X	X	X	X	X	X	X	X
DCT9000					X	X	X	X	X	X	X	X	X
SRT				X			X	X	X	X	X	X	X
75 LPM								X	X	X	X	X	X
150 LPM								X	X	X	X	X	X
300 LPM								X	X	X	X	X	X
Mag Tape Input					X		X	X	X	X	X	X	X
Mode I-OCR													X
OCR											X	X	X
Mag Tape Output #1											X	X	X
Mag Tape Output #2											X	X	X
Mag Tape Output #3											X	X	X
WWMCCS			X									X	X
KVDT #1									X	X	X	X	X
KVDT #2								X	X				X
Mode II 50 Baud												X	X
Mode II 75 Baud												X	X
Message Distribution										X	X	X	X
Dynatest													X

2-3

been configured based on the data presented in reference 2 of the related documents subsection. The second phase of testing will then be accomplished in the following manner. A typical system configuration based on expected loads is chosen. For example, one or two processors are configured together with a given mix of local and remote devices to produce an expected load. CPU utilization measurements are recorded when the system is idle and, again, at the height of the test at 1 minute intervals. Concurrent with these measurements software based monitors will be sampling the incoming stimuli and recording their time of arrival at the system and time of final disposal. The careful analysis and correlation of all the data collected during a test should yield system throughput performance for a particular load. The results collected during this phase of the test will serve several purposes. Since these results are documented they will help meet the requirements imposed by MOP165. Additionally, the resulting throughput rates derived from this type of test will serve as baseline figures for future implementations of AFAMPE. Lastly, since the computed throughput rates for each test scenario contain system overhead, they should help identify potential AFAMPE trouble areas when compared with the "pure" results derived from Phase 1. This, in turn, would provide an indication of the processor's interrupt handling capabilities and AFAMPE software behavior.

2.2   TEST DATA REQUIREMENTS

The success of the test procedures herein proposed largely depends on the data used to stimulate the system under test. A correct mix of message traffic containing varying amounts of line blocks, routing conditions, precedences, security classifications,

and errors should be chosen. Detailed instructions for building test data files and their contents are given in Section 3 of this document.

2.3   TEST HARDWARE REQUIREMENTS

The test procedures given in this report, initially to be performed at the testbed site at Tinker AFB, OK, will require the following hardware:

   o   one to two 3244 processors with one megabytes of memory each

   o   one to two 7/32 processors with one megabytes of memory each

   o   one 12 position patch and jack panel for patching Mode I devices

   o   two TLCs

   o   at least two 4800 baud ASC circuits

   o   two 4800 baud Mode I devices

   o   four ASRs (Mode II and V)

   o   six remote KVDTs

   o   three printers (75, 150, and 300 LPM)

   o   two OCR devices

   o   one card punch

   o   one card reader

   o   one card reader/punch

   o   one paper tape reader/punch

   o   four 600 LPM high speed printers

   o   four magnetic tape controllers with twelve 800 BPI drives

o   two 1600 BPI tape drives

o   four console KVDTs with slave printers each

o   ten T50 disk drives

o   two 200/300 disk drives

2.4   TEST RESULTS

The purpose of conducting detailed test scenarios is to derive measurements that will become the basis of system throughput rate figures.   In general, two types of measurements will be taken during the conductance of the various test scenarios:

a.   CPU utilization measurements recorded with the aid of a hardware monitor device

b.   System throughput statistics recorded through the use of software based monitors available to the system under test.

The results collected from a given test should be labeled and dated immediately.   These data will become the input to further analysis and derivation of system throughput performance for that particular scenario.   Throughput performance will be ultimately expressed as a function of line blocks per second.   This measure will become a standard for all phases and steps of the test cycle and it will provide representative figures for different loads and configurations.

The data collected during Phase 2 of the test is the most important because this information documents the throughput rates necessary for certification.   However, the results obtained during Phase 1 are just as important as analytical tools to identify the strengths and weaknesses of the system under test.

2.5 PERFORMANCE EVALUATION CRITERIA

It is recommended the AFAMPE, in order to meet acceptable performance criteria, should be able to cumulatively process and deliver to the end customer up to 98% of a load applied to the system during a given period of time. It is also recommended that under no circumstances will cumulative system performance be considered acceptable should it drop below a 65% throughput level.

SECTION 3 - TEST SCENARIOS

3.1   GENERAL

To ascertain a successful performance test it is imperative
the environment be stringently controlled and the test scenarios
be explicit.   To achieve this, selected data must be prepared
prior to commencing test.   Table 3-1 depicts the data labeling,
types of addresses, type data, and number of line blocks required
for development of the test data.   A discussion of the actual Test
Data Preparations is covered under Paragraph 3.2.   Following data
preparation the actual test scenarios are shown under Paragraph
3.3.

3.2   TEST DATA PREPARATION

Data preparation will be accomplished as delineated below.

3.2.1   AFAMPE Tapes

3.2.1.1   ATAPE #1

Build an intercept tape at the AFAMPE with a mix of 30 data
pattern and 200 narrative unclassified messages.   Each data
pattern message will contain 250-line blocks, be of priority
precedence, routed to an ASC tributary other than the AFAMPE.
This will effect these messages to queue to the ASC.   Each
narrative message will be 35-line blocks long, be of routine
precedence, routed to an ASC tributary other that the AFAMPE.
Label this tape ATAPE #1.

3.2.1.2   ATAPE #2

Build a magnetic tape for transmission from the AFAMPE to the
WWMCCS with 40 unclassified data pattern messages.   Each message
will contain 250-line blocks, be of priority precedence, routed to
the WWMCCS.   Label this tape ATAPE #2.

3.2.1.3 ATAPE #3

Build an _intercept_ tape at the AFAMPE with a mix of 30 data pattern and 200 narrative unclassified messages. Each data pattern message will contain 250-line blocks, be of priority precedence, routed to magnetic tape customers at the SRT and DCT9000 communications terminals. The narrative messages will be 35-line blocks long, be of priority precedence, routed to the SRT and DCT9000 communications terminals. Label this tape ATAPE #3.

3.2.1.4 ATAPE #4

Build a magnetic tape at the AFAMPE with 20 unclassified data pattern messages. Each message will contain 150-line blocks, be of immediate precedence, routed to magnetic tape customers at the SRT and DCT9000 communications terminals. Label this tape ATAPE #4.

3.2.2 WWMCCS Tapes

3.2.2.1 WTAPE #1

Build a magnetic tape for transmission from the WWMCCS with 40 unclassified data pattern messages. Each message will contain 250-line blocks, be of priority precedence, routed to a magnetic tape customer at the AFAMPE. Label this tape WTAPE #1.

3.2.3 DCT9000 Tapes

3.2.3.1 DTAPE #1

Build a magnetic tape for the DCT9000 that contains 30 unclassified data pattern messages. Each message will contain 250-line blocks, be of priority precedence, routed to the magnetic tape customer of the SRT communications terminal. Label this tape DTAPE #1.

3.2.3.2 DTAPE #2

Build a magnetic tape for the DCT9000 that contains 50 unclassified data pattern messages. Each message will contain 250-line blocks, be of priority precedence, routed to the three magnetic tape customers of the AFAMPE. Label this tape DTAPE #2.

3.2.4 SRT Tapes

3.2.4.1 STAPE #1

Build a magnetic tape for the SRT that contains 20 unclassified data pattern messages. Each message will contain 250-line blocks, be of priority precedence, routed to the magnetic tape customer at the DCT9000. Label this tape STAPE #1.

3.2.5 OCR-Messages

3.2.5.1 Mode I-OCR

Prepare ten 2-page and two 9-page unclassified messages for transmission via the Mode I-OCR with immediate precedence and addressed to the 75, 150 and 300 LPM printer terminals. Label these messages externally as Mode I-OCR Batch #1.

3.2.5.2 DCT9000-OCR

Prepare ten 2-page and two 9-page unclassified messages for transmission via the DCT9000-OCR with routine precedence and addressed to the SRT. Label these messages externally as "DCT-OCR Batch #1".

3.2.5.3 SRT-OCR

Prepare ten 2-page and two 9-page unclassified messages for transmission via the SRT-OCR with routine precedence and addressed to the DCT9000 comm terminal. Label these messages externally as "SRT-OCR Batch #1".

3.2.5.4 DCT9000-OCR

Prepare twenty 2-page and two 9-page unclassified messages for transmission via the DCT9000-OCR with routine precedence and addressed to the AFAMPE Message Distribution. Include three office symbols that are found in the Message Distribution Tables. Label the messages externally as DCT-OCR Batch #2.

3.2.5.5 Mode I-OCR

Prepare twenty 1-page unclassified messages for transmission via the Mode I-OCR with precedence of immediate and addressed to exercise the AFAMPE Message Distribution. Include for local distribution three office symbols that are found in the Message Distribution Tables. Label these messages externally as Mode I-OCR Batch #2.

3.2.5.6 AFAMPE OCR

Prepare twenty 1-page unclassified messages for transmission via the AFAMPE OCR with precedence of immediate and addressed to the SRT and DCT9000 terminals, ASC tributary, 75, 150, and 300 LPM printer terminals. Label these messages externally as AFAMPE-OCR Batch #1.

3.2.6 KVDT Messages

3.2.6.1 KVDT Batch #1

Prepare ten unclassified 1-page messages for input on KVDT's with priority precedence and addressed to the SRT, DCT9000, 75 LPM, 150 LPM terminal, 300 LPM terminal and the ASC tributary. Ensure the PLA tables have been updated to include these addressees. Label these messages externally as KVDT Batch #1.

3.2.7 Mode II Messages

3.2.7.1 Mode II (50 baud) Paper Tape

Prepare ten unclassified 2-page messages for transmission via the Mode II, 50 baud terminal with precedence of routine and addressed to the 75 baud terminal, the ASC tributary, and the AFAMPE Message Distribution. Include three office symbols that are found in the MD Tables. Label these paper tapes externally as Mode II - 50 baud.

3.2.7.2 Mode II (75 baud) Paper Tape

Prepare ten unclassified 2-page messages for transmission via the Mode II, 75 baud terminal with precedence of routine and addressed to the 50 baud terminal, the ASC tributary and the AFAMPE Message

Distribution. Include three office symbols that are found in the
MD Tables. Label these paper tapes externally as Mode II – 75
baud.

3.2.8 FLASH #1

Prepare for input at the DCT9000 three FLASH, 1-page messages
which are addressed to the ASC tributary, AFAMPE Message
Distribution (three office symbols which are found in the MD
Tables), and the WWMCCS. Label these messages externally as FLASH
#1.

3.2.9 AFAMPE MISCUES

Prepare for input at the AFAMPE three 1-page messages that contain
various errors. Develop two of the messages to contain errors
that will cause them to automatically queue to the MAO KVDT for
correction. Develop one message that contains an error which will
cause that message to be rejected. Label these messages
externally as AFAMPE MISCUES.

3.3 TEST SCENARIOS

TABLE 3-1.   TEST DATA

NAME	ADDRESSEE(S)	CONTENTS	APPROXIMATE LINE BLOCKS
ATAPE #1	ASC Tributary	30 Data Pattern, 200 Narrative	14,500
ATAPE #2	WWMCCS	50 Data Pattern	12,500
ATAPE #3	Magnetic tape customers at SRT and DCT9000 comm terminals	30 Data Pattern, 200 Narrative	14,500
ATAPE #4	Magnetic tape customers at SRT and DCT9000 and ASC Tributary	20 Data Pattern	3,000
WTAPE #1	Magnetic tape customer at AFAMPE	40 Data Pattern	10,000
DTAPE #1	Magnetic tape customer at SRT	30 Data Pattern	7,500
DTAPE #2	3 Magnetic tape customers at AFAMPE	50 Data Pattern	12,500
STAPE #1	Magnetic tape customer at DCT9000	20 Data Pattern	5,000

TABLE 3-1. TEST DATA (Continued)

NAME	ADDRESSEE(S)	CONTENTS	APPROXIMATE LINE BLOCKS
Mode I-OCR Batch #1	75, 150 & 300 LPM terminals	10 2-page, 2 9-page	710
Mode I-OCR Batch #2	AFAMPE Message Distribution	20 1-page	400
DCT9000 Batch #1	SRT	10 2-page, 2 9-page	710
DCT9000 Batch #2	AFAMPE Message Distribution	20 2-page, 2 9-page	1,410
SRT-OCR Batch #1	DCT9000	10 2-page, 2 9-page	710
KVDT	SRT, DCT9000, 75, 150, 300 LPM terminals, & ASC Tributary	10 1-page	200
AFAMPE-OCR Batch #1	SRT, DCT9000 & ASC Tributary	20 1-page	400
Mode II- 50 baud	75 baud, MD & ASC	10 2-page	400
Mode II- 75 baud	50 baud, MD & ASC	10 2-page	400

TABLE 3-1.   TEST DATA (Continued)

NAME	ADDRESSEE(S)	CONTENTS	APPROXIMATE LINE BLOCKS
FLASH #1	ASC Tributary, MD, and WWMCCS	3 1-page	60
AFAMPE MISCUE		3 1-page	60

3.3.1 Test Scenario #1

PURPOSE:

1. Measure throughput of one 4800 baud ASC circuit.

2. Measure comm processor utilization.

3. Objective line blocks; 29,000

TEST OUTPUT:

Journal entries, console printouts, STAT 2's, and completed CPU graphs.

PRETEST PROCEDURES:

1. To build a queue for the AFAMPE circuit at the ASC, mount and transmit ATAPE #3 directly to the ASC. Request ASC take action to place these messages on the AFAMPE queue for later transmission.

2. The AFAMPE is loaded and ready for traffic.

3. There are qualified operators on duty.

4. Insure that one ASC circuit is available for testing.

5. All directly connected circuits are "set out".

6. Insure processor utilization monitoring equipment is connected to Processor "A" and set to record comm processor utilization (CPU) at one minute intervals.

SYSTEM CONFIGURATION:

1. Standard two processor.

2. Intercept tape is open and the SRT and DCT9000 comm terminals are Alt-routed to intercept.

TEST PROCEDURES:

1. Initialize CPU monitoring device.

2. Initiate Stat 2.

3. Mount and start input of ATAPE #1.

4. "Set in" one ASC circuit.

5. Request ASC "place in service" one AFAMPE circuit.   Verify
   bidirectional flow of message traffic.

6. Initiate Stat 2's at 10 minute intervals.

7. Terminate the test and CPU monitoring device after one hour
   or when all messages have been processed.

8. Take final Stat 2.

9. Gather and label as Test #1 all output criteria; journal
   entries, console printouts, Stat 2's and CPU utilization
   results.

3.3.2   Test Scenario #2

PURPOSE:

1.   Measure throughput of two 4800 Baud ASC circuits.

2.   Measure CPU.

3.   Objective line blocks; 41,500

TEST INPUT:

ATAPE #1, ATAPE #2 and ATAPE #3

TEST OUTPUT:

Journal entries, console print-outs, Stat 2's, and completed CPU graphs.

PRETEST PROCEDURES:

1.   To build a queue for the AFAMPE circuit at the ASC, mount and transmit ATAPE #2 and ATAPE #3 directly to the ASC.   Request ASC take action to place these messages on the AFAMPE queue for later transmission.

2.   The AFAMPE is loaded and ready for traffic.

3.   Qualified operators are on duty.

4.   Two ASC circuits are available for testing.

5.   All directly connected circuits are "set out".

6.   Insure processor utilization monitoring equipment is connected to Processor "A" and set to record utilization at one minute intervals.

SYSTEM CONFIGURATION:

1.   Standard two processor.

2.   Intercept tape is open and the WWMCCS, SRT, and DCT9000 are alt-routed to intercept.

TEST PROCEDURES:

1. Initialize CPU monitoring device.

2. Initiate Stat 2.

3. Mount and start input of ATAPE #1.

4. "Set in" two ASC circuits.

5. Request ASC place in service two AFAMPE circuits.

6. Initiate stat 2's at 10 minute intervals.

7. Terminate the test and CPU monitoring device after one hour or when all messages have been processed, whichever first.

8. Initiate final Stat 2.

9. Gather and label as Test #2 all output criteria; Journal entries, console printouts, Stat 2's, and completed CPU results.

3.3.3 Test Scenario #3

PURPOSE:

1. Measure throughput of the WWMCCS circuit.

2. Measure CPU.

3. Objective line blocks; 22,500

TEST INPUT:

ATAPE #2 and WTAPE #1

TEST OUTPUT:

Journal entries, console printouts, Stat 2's, and completed CPU results.

PRETEST PROCEDURES:

1. AFAMPE is loaded and ready for traffic.

2. Qualified operators are on duty.

3. WWMCCS circuit is available for testing.

4. Insure processor utilization monitoring equipment is connected to Processor "A" and set to record utilization at one minute intervals.

SYSTEM CONFIGURATION:

1. Standard two processor.

2. Intercept tape is open and the DCT9000 comm terminal is alt-routed to intercept.

TEST PROCEDURES:

1. Initialize CPU monitoring device.

2. Initiate Stat 2.

3. Mount and start input of ATAPE #2.

4. At the AFAMPE 'set in' the WWMCCS circuit.

5. Request WWMCCS place in service their AFAMPE circuit.

6. Request WWMCCS transmit WTAPE #1.

7. Initiate Stat 2's at 10 minute intervals.

8. Terminate the test and CPU monitoring device after 30 minutes or when all messages have been processed.

9. Initiate final Stat 2.

10. Gather and label as Test #3 all output criteria; journal entries, console printouts, Stat 2's, and completed CPU results.

3.3.4 Test Scenario #4

PURPOSE:

1. Measure throughput of the SRT comm terminal at 4800 baud.

2. Measure CPU during peak load.

3. Objective line blocks; 20,210

TEST INPUT:

ATAPE #3, STAPE #1, and SRT-OCR Batch #1

TEST OUTPUT:

Journal entries, console printouts, Stat 2's, and completed CPU results.

PRETEST PROCEDURES:

1. AFAMPE is loaded and ready for traffic.

2. Qualified operators are on duty.

3. SRT terminal is available for testing.

4. Insure processor utilization monitoring equu8pment is connected to Processor "A" and set to record utilization at one minute intervals.

SYSTEM CONFIGURATION:

1. Standard two processor.

2. Intercept tape is open with the DCT9000 alt-routed to intercept.

TEST PROCEDURES:

1. Initialize CPU monitoring device.

2. Initiate Stat 2.

3. Mount and start input of ATAPE #3.

4. Mount and start input of STAPE #1 at the SRT comm terminal.

5. Place in service the AFAMPE circuit at the SRT.

6. "Set in" the SRT circuit at the AFAMPE.

7. Verify bidirectional flow of message traffic.

8. Initiate Stat 2's at ten minute intervals.

9. When STAPE #1 is completed and rewound, transmit SRT-OCR
    Batch #1.

10. Terminate the test and CPU monitoring device after one hour
    or when all messages have completed, whichever first.

11. Initiate final Stat 2.

12. Gather and label as Test #4 all output criteria; journal
    entries, console printouts, Stat 2's, and completed CPU
    results.

3.3.5 Test Scenario #5

PURPOSE:

1. Measure throughput of the DCT9000 terminal at 4800 baud.

2. Measure CPU.

3. Objective line blocks; 22,710

TEST INPUT:

ATAPE #3, DTAPE #1 and DCT-OCR Batch #1

TEST OUTPUT:

Journal entries, console printouts, Stat 2's.

PRETEST PROCEDURES:

1. AFAMPE is loaded and ready for traffic.

2. Qualified operators are on duty.

3. DCT9000 terminal is available for testing.

4. Insure processor utilization monitoring equipment is
    connected to Processor "A" and set to record utilization at
    one minute intervals.

SYSTEM CONFIGURATION:

1. Standard two processor.

2. Intercept tape is open and the SRT is alt-routed to intercept.

3. An OCR is connected to the DCT9000 terminal.

TEST PROCEDURES:

1. Initialize CPU monitoring device

2. Initiate Stat 2.

3. Mount and start input of ATAPE #3.

4. Mount and start input of DTAPE #1 at the DCT9000 comm
    terminal.

5. Place in service the AFAMPE circuit at the DCT9000.

6. "Set in" the DCT9000 terminal at the AFAMPE.

7. Verify bidirectional flow of message traffic.

8. Initiate Stat 2's at 10 minute intervals.

9. When DTAPE #1 is completed and rewound, transmit DCT-OCR Batch #1.

10. Terminate the test and CPU monitoring device after one hour or when all messages have completed, whichever first.

11. Initiate final Stat 2.

12. Gather and label as Test #5 all output criteria; journal entries, console printouts, Stat 2's, and completed CPU results.

3.3.6   Test Scenario #6

PURPOSE:

1. Measure system performance and CPU while exercising two 4800 baud ASC circuits and one 4800 baud Mode I terminal and one input magnetic tape.

2. Objective line blocks; 54,710

TEST INPUT:

ATAPE #1, ATAPE #3, ATAPE #4, DTAPE #1, DCT-OCR Batch #1

TEST OUTPUT:

Journal entries, console printouts, Stat 2's, and completed CPU results.

PRETEST PROCEDURES:

1. To build a queue for the AFAMPE circuit at the ASC, mount and transmit ATAPE #3 directly to the ASC. Request the ASC take action to place these messages on the AFAMPE queue for later transmission.

2. The AFAMPE is loaded and ready for traffic.

3. Two ASC circuits and the DCT9000 are ready for testing.

4. Qualified operators are on duty.

5. Insure processor utilization monitoring equipment is connected to Processor "A" and set to record utilization at one minute intervals.

SYSTEM CONFIGURATION:

1. Standard two processor.

2. Intercept tape open and the SRT alt-routed to intercept.

3. OCR is connected to the DCT9000.

TEST PROCEDURES:

1. Initialize CPU monitoring device.

2. Initiate Stat 2.

3. Mount and start input of ATAPE #1.

4. At the DCT9000 mount and start input of DTAPE #1.

5. At the AFAMPE "set in" two ASC circuits and the DCT9000
    circuit.

6. Request the ASC place in service two AFAMPE circuits.

7. At the DCT9000 place in service the AFAMPE.

8. Verify the exchange of message traffic.

9. Initiate Stat 2 at 10 minute intervals.

10. After fifteen minutes of testing (T plus 15 minutes) input
    ATAPE #4.

11. When DTAPE #1 is completed and rewound, transmit DCT-OCR
    Batch #1.

12. Terminate test and CPU monitoring device after one hour or
    when all messages have been processed, whichever first.

13. Initiate final Stat 2.

14. Gather and label as Test #6 all output criteria; journal
    entries, console printouts, Stat 2's, and completed CPU
    results.

3.3.7   Test Scenario #7

PURPOSE:

1. Measure system performance and CPU while exercising two 4800 baud ASC circuits and two 4800 baud Mode I terminals and one input magnetic tape.

2. Objective line blocks; 94,840

TEST INPUT:

ATAPE #1, ATAPE #3, ATAPE #4, DTAPE #1, STAPE #1, DCT-OCR Batch #1, and SRT-OCR Batch #1

TEST OUTPUT:

Journal entries, console printouts, Stat 2's, and completed CPU results.

PRETEST PROCEDURES:

1. To build a queue for the AFAMPE circuit at the ASC, mount and transmit ATAPE #3 directly to the ASC. Request the ASC take action to place these messages on the AFAMPE queue for later transmission.

2. The AFAMPE is loaded and ready for traffic.

3. Qualified operators are on duty.

4. Two ASC circuits, SRT, and the DCT9000 are ready for testing.

5. Insure processor utilization monitoring equipment is connected to Processor "A" and set to record utilization at one minute intervals.

SYSTEM CONFIGURATION:

1. Standard two processor.

2. OCR is connected to the AFAMPE.

3. SRT is connected to the AFAMPE.

4. DCT9000 is connected to the AFAMPE.

TEST PROCEDURES:

1. Initialize CPU monitoring device.

2. Initiate Stat 2.

3. Mount and start input of ATAPE #1.

4. At the DCT9000, mount and start input of DTAPE #1.

5. At the SRT, mount and start input of STAPE #1.

6. At the AFAMPE "set in" two ASC circuits, SRT and the DCT9000.

7. Request the ASC place in service two AFAMPE circuits.

8. Place the AFAMPE circuit in service at the DCT9000.

9. Place the AFAMPE circuit in service at the SRT.

10. Verify message flow.

11. Initiate Stat 2's at 10 minute intervals.

12. When DTAPE #1 is completed and rewound, transmit DCT-OCR Batch #1.

13. When STAPE #1 is completed and rewound, transmit SRT-OCR Batch #1.

14. After 20 minutes of testing (T plus 20 minutes) read in from the AFAMPE, ATAPE #4.

15. Terminate test and CPU monitoring device after one hour or when all messages have processed, whichever first.

16. Initiate final Stat 2.

17. Gather and label as Test #7 all output criteria; journal entries, console printouts, Stat 2's, and completed CPU results.

3.3.8 Test Scenario #8

PURPOSE:

1. Measure system performance and CPU while exercising two 4800 baud ASC circuits, two 4800 baud Mode I terminals, 75, 150, and 300 LPM printers and one input magnetic tape.

2. Objective line blocks; 97,680

TEST INPUT:

ATAPE #1, ATAPE #3, ATAPE #4, DTAPE #1, STAPE #1, Mode I-OCR Batch #1, DCT-OCR Batch #1, and SRT-OCR Batch #1

TEST OUTPUT:

Journal entries, console printouts, Stat 2's, and completed CPU results.

PRETEST PROCEDURES:

1. To build a queue for the AFAMPE circuit at the ASC, mount and transmit ATAPE #3 directly to the ASC. Request the ASC take action to place these messages on the AFAMPE queue for later transmission.

2. The AFAMPE is loaded and ready for traffic.

3. Qualified operators are on duty.

4. Two ASC circuits, SRT and DCT9000 are ready for testing.

5. Insure processor utilization monitoring equipment is connected to Processor "A" and set to record utilization at one minute intervals.

SYSTEM CONFIGURATION:

1. Standard two processor.

2. An OCR is connected to the DCT9000.

3. The Mode I-OCR is connected to the ASC.

4. The SRT is connected to the AFAMPE.

5. The DCT900 is connected to the AFAMPE.

TEST PROCEDURES:

1. Initialize CPU monitoring device.

2. Initiate Stat 2.

3. Mount and start input of ATAPE #1.

4. At the DCT9000, mount and start input of DTAPE #1.

5. At the SRT, mount and start input of STAPE #1.

6. At the AFAMPE "set in" two ASC circuits, SRT and DCT9000.

7. Request the ASC place in service two AFAMPE circuits.

8. Place in service the AFAMPE circuit at the DCT9000.

9. Place in service the AFAMPE circuit at the SRT.

10. Verify message flow.

11. Initiate Stat 2's at 10 minute intervals.

12. When DTAPE #1 has completed and rewound, transmit DCT-OCR Batch #1.

13. When STAPE #1 has completed and rewound, transmit SRT-OCR Batch #1.

14. Request the ASC "set in" the Mode I-OCR.

15. At the AFAMPE "set in" the 75, 150 and 300 LPM printer terminals.

16. At T plus 20 minutes transmit Mode I-OCR Batch #1.

17. At T plus 35 minutes transmit ATAPE #4.

18. Terminate test and CPU monitoring device after one hour or when all messages have processed, whichever first.

19. Initiate final Stat 2.

20. Gather and label as Test #8 all output criteria; journal entries, console printouts, Stat 2's, and completed CPU results.

3.3.9 Test Scenario #9

PURPOSE:

1. Measure system performance and CPU while exercising two 4800 baud ASC circuits, two 4800 baud Mode I terminals, 75, 150, and 300 LPM printer terminals, two KVDT's, one input magnetic tape.

2. Objective line blocks; 99,080

TEST INPUT:

ATAPE #1, ATAPE #3, ATAPE #4, DTAPE #1, STAPE #1, Mode I-OCR Batch #1, DCT-OCR Batch #1, KVDT-Batch #1, SRT-OCR Batch #1.

TEST OUTPUT:

Journal entries, console printouts, Stat 2's, and completed CPU results.

PRETEST PROCEDURES:

1. To build a queue for the AFAMPE circuit at the ASC, mount and transmit ATAPE #3 directly to the ASC. Request the ASC take action to place these messages on the AFAMPE queue for later transmission.

2. The AFAMPE is loaded and ready for traffic.

3. Qualified operators are on duty.

4. Two ASC circuits, SRT, DCT9000, and the 75, 150, and 300 LPM printer terminals are ready for testing.

5. Insure processor utilization monitoring equipment is connected to Processor "A" and set to record utilization at one minute intervals.

SYSTEM CONFIGURATION:

1. Standard two processor.

2. An OCR is connected to the DCT9000.

3. The Mode I-OCR is connected to the ASC.

4. The SRT is connected to the AFAMPE.

5. The DCT9000 is connected to the AFAMPE.

6. Two KVDT's are connected to the AFAMPE and in a "ready" state.

TEST PROCEDURES:

1. Initialize CPU monitoring device.

2. Initiate Stat 2.

3. Mount and start input of ATAPE #1.

4. At the DCT9000,, mount and start input of DTAPE #1.

5. At the SRT, mount and start input of STAPE #1.

6. At the AFAMPE "set in" two ASC circuits, SRT and DCT9000.

7. Request the ASC place in service two AFAMPE circuits.

8. Place in service the AFAMPE circuit at the DCT9000.

9. Place in service the AFAMPE circuit at the SRT.

10. Verify message flow.

11. Initiate Stat 2's at 10 minute intervals.

12. When DTAPE #1 has completed and rewound, transmit DCT-OCR Batch #1.

13. When STAPE #1 has completed and rewound, transmit SRT-OCR Batch #1.

14. Request the ASC "set in" the Mode I-OCR.

15. At the AFAMPE "set in" the 75, 150 and 300 LPM printer terminals.

16. At T plus 20 minutes transmit Mode I-OCR Batch #1.

17. At T plus 25 minutes transmit KVDT-Batch #1 via two KVDT's.

18. At T plus 35 minutes transmit ATAPE #4.

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19. Terminate test and CPU monitoring device after two hours or when all messages have processed, whichever first.

20. Initiate final Stat 2.

21. Gather and label as Test #9 all output criteria; journal entries, console printouts, Stat 2's, and completed CPU results.

3.3.10   Test Scenario #10

PURPOSE:

1. Measure system performance and CPU while exercising two 4800
    baud ASC circuits, two 4800 baud Mode I terminals, 75, 150,
    and 300 LPM printer terminals, two KVDT's, Local Message
    Distribution (MD), one input magnetic tape.

2. Objective line blocks; 84,060

TEST INPUT:

ATAPE #1, ATAPE #3, ATAPE #4, STAPE #1, Mode I-OCR Batch #1,
DCT-OCR Batch #2, KVDT-Batch #1, SRT-OCR Batch #1.

TEST OUTPUT:

Journal entries, console printouts, Stat 2's, and completed CPU
results.

PRETEST PROCEDURES:

1. To build a queue for the AFAMPE circuit at the ASC, mount and
    transmit ATAPE #3 directly to the ASC. Request the ASC take
    action to place these messages on the AFAMPE queue for later
    transmission.

2. The AFAMPE is loaded and ready for traffic.

3. Qualified operators are on duty.

4. Two ASC circuits, SRT and DCT9000 are ready for testing.

5. Message Distribution and PLA tables have been updated as
    applicable.

6. Insure processor utilization monitoring equipment is
    connected to Processor "A" and set to record utilization at
    one minute intervals.

SYSTEM CONFIGURATION:

1. Standard two processor.

2. 75, 150 and 300 LPM printer terminals are connected to the AFAMPE.

3. An OCR is connected to the DCT9000.

4. Two KVDT's are connected to the AFAMPE.

5. *The Mode I-OCR is connected to the ASC.*

6. The SRT is connected to the AFAMPE.

7. The DCT9000 is connected to the AFAMPE.

8. Measure CPU while system is idle.

TEST PROCEDURES:

1. Initialize CPU monitoring device.

2. Initiate Stat 2.

3. Mount and start input of ATAPE #1.

4. At the SRT, mount and start input of STAPE #1.

5. At the AFAMPE "set in" two ASC circuits, SRT and DCT9000.

6. Request the ASC place in service two AFAMPE circuits.

7. Place in service the AFAMPE circuit at the DCT9000.

8. At the DCT9000 start input of DCT-OCR Batch #2.

9. Place in service the AFAMPE circuit at the SRT.

10. Verify message flow.

11. Initiate Stat 2's at 10 minute intervals.

12. When STAPE #1 has completed and rewound, transmit SRT-OCR Batch #1.

13. Request the ASC "set in" the Mode I-OCR.

14. At the AFAMPE "set in" the 75, 150 and 300 LPM printer terminals.

15. At T plus 20 minutes transmit Mode I-OCR Batch #1.

16. At T plus 25 minutes transmit KVDT-Batch #1 via two KVDT's.

17. At T plus 35 minutes transmit ATAPE #4.

18. Exercise test for two hours or until all messages have processed, whichever first.

19. Initiate final Stat 2.

20. Gather and label as Test #10 all output criteria; journal entries, console printouts, Stat 2's, and completed CPU results.

3.3.11   Test Scenario #11

PURPOSE:

1. Measure system performance and CPU while exercising two 4800 baud ASC circuits, two 4800 baud Mode I terminals, 75, 150, and 300 LPM printer terminals, one KVDT, one OCR, local MD, three magnetic tape customers (output), one input magnetic tape.

2. Objective line blocks; 137,840

TEST INPUT:

ATAPE #1, ATAPE #2, ATAPE #3, ATAPE #4, DTAPE #1, STAPE #1, Mode I-OCR Batch #1, SRT-OCR Batch #1, Mode I-OCR Batch #2, KVDT Batch #1, AFAMPE OCR Batch #1.

TEST OUTPUT:

Journal entries, console printouts, Stat 2's, and completed CPU results.

PRETEST PROCEDURES:

1. To build a queue for the AFAMPE circuit at the ASC, mount and transmit ATAPE #2 and ATAPE #3 directly to the ASC. Request the ASC take action to place these messages on the AFAMPE queue for later transmission.

2. The AFAMPE is loaded and ready for traffic.

3. Qualified operators are on duty.

4. The three magnetic tape stations are on load point and ready to receive.

5. Two ASC circuits, SRT and DCT9000 are ready for testing.

6. Insure processor utilization monitoring equipment is connected to Processor "A" and set to record utilization at one minute intervals.

SYSTEM CONFIGURATION:

1. Intercept tape open and WWMCCS alt-routed to intercept.

2. Standard two processor.

3. 75, 150 and 300 LPM printer terminals are connected to the AFAMPE.

4. An OCR is connected to the AFAMPE.

5. One KVDT is connected to the AFAMPE.

6. The Mode I-OCR is connected to the ASC.

7. Three magnetic tape servos are connected to the AFAMPE.

8. The SRT is connected to the AFAMPE.

9. The DCT9000 is connected to the AFAMPE.

10. CPU measuring device is connected to Processor "A".

TEST PROCEDURES:

1. Initialize CPU monitoring device.

2. Initiate Stat 2.

3. Mount and start input of ATAPE #1.

4. At the DCT9000, mount and start input of DTAPE #2.

5. At the SRT mount and start input of STAPE #1.

6. At the AFAMPE "set in" two ASC circuits, SRT, and DCT9000.

7. Request the ASC place in service two AFAMPE circuits.

8. Place in service the AFAMPE circuit at the DCT9000.

9. Place in service the AFAMPE circuit at the SRT.

10. Verify message flow.

11. Initiate Stat 2's at 10 minute intervals.

12. When STAPE #1 has completed and rewound, transmit SRT-OCR Batch #1.

13. Request the ASC "set in" the Mode I-OCR.

14. At the AFAMPE "set in" the 75, 150 and 300 LPM printer terminals.

15. At T plus 15 minutes transmit Mode I-OCR Batch #1. Upon completion transmit Mode I-OCR Batch #2.

16. At T plus 25 minutes transmit KVDT-Batch #1 via one KVDT.

17. At T plus 30 minutes transmit AFAMPE-OCR Batch #1.

18. At T plus 35 minutes transmit ATAPE #4.

19. Terminate test and CPU monitoring device after two hours or when all messages have processed, whichever first.

20. Initiate final Stat 2.

21. Gather and label as Test #11 all output criteria; journal entries, console printouts, Stat 2's and completed CPU results.

3.3.12 Test Scenario #12

PURPOSE:

1. Measure system performance and CPU while exercising two 4800 baud ASC circuits, two 4800 baud Mode I terminals, 75, 150, and 300 LPM printer terminals, one KVDT, one OCR, local MD, three magnetic tape customers (output), one input magnetic tape, WWMCCS, Mode II (50 and 75 baud).

2. Objective line blocks; 212,460

TEST INPUT:

ATAPE #1, ATAPE #2, ATAPE #3, ATAPE #4, DTAPE #2, STAPE #1, WTAPE #1, Mode I-OCR Batch #1, Mode I-OCR Batch #2, SRT-OCR Batch #1, KVDT Batch #1, AFAMPE-OCR Batch #1, FLASH #1, and AFAMPE MISCUES.

TEST OUTPUT:

Journal entries, console printouts, Stat 2's, and completed CPU results.

PRETEST PROCEDURES:

1. To build a queue for the AFAMPE circuit at the ASC, mount and transmit ATAPE #2 and ATAPE #3 directly to the ASC. Request the ASC take action to place these messages on the AFAMPE queue for later transmission.

2. The AFAMPE is loaded and ready for traffic.

3. Qualified operators are on duty.

4. The three magnetic tape stations are on load point and ready to receive.

5. Two ASC circuits, SRT, DCT9000 and WWMCCS are ready for testing.

SYSTEM CONFIGURATION:

1. Standard two processor.

2. 75, 150 and 300 LPM printer terminals are connected to the AFAMPE.

3. An OCR is connected to the AFAMPE.

4. One KVDT is connected to the AFAMPE.

5. The Mode I-OCR is connected to the ASC.

6. Three magnetic tape servos are connected to the AFAMPE.

7. The SRT is connected to the AFAMPE.

8. The 50 and 75 baud (full duplex) circuits are connected to the AFAMPE.

9. The DCT9000 is connected to the AFAMPE.

10. CPU measuring device is connected to Processor "A" and set to record utilization at one minute intervals.

11. The WWMCCS is connected to the AFAMPE.

TEST PROCEDURES:

1. Initialize CPU monitoring device.

2. Initiate Stat 2.

3. Mount and start input of ATAPE #1.

4. At the DCT9000, mount and start input of DTAPE #2.

5. At the SRT, mount and start input of STAPE #1. When it completes and rewinds, read in SRT-OCR Batch #1.

6. At the AFAMPE "set in" two ASC circuits, SRT, DCT9000, Mode II (50 and 75 baud) terminals, and WWMCCS.

7. Request the ASC place in service two AFAMPE circuits and the Mode I-OCR.

8. Place in service the AFAMPE circuit at the DCT9000.

9. Place in service the AFAMPE circuit at the SRT.

10. Place in service the AFAMPE circuit at the WWMCCS.

11. Verify message flow.

12. Initiate Stat 2's at 10 minute intervals.

13. Activate and start transmission of Mode II devices.

14. At the AFAMPE "set in" the 75, 150 and 300 LPM printer terminals.

15. At T plus 10 minutes transmit Mode I-OCR Batch #1 and Batch #2.

16. At T plus 20 minutes mount and start input of WTAPE #1 at the WWMCCS.

17. At T plus 25 minutes mount and transmit from the AFAMPE ATAPE #2.

18. At T plus 30 minutes transmit AFAMPE-OCR Batch #1.

19. At T plus 35 minutes transmit ATAPE #4.

20. Terminate test and CPU monitoring device after two hours or when all messages have processed, whichever first.

21. Initiate final Stat 2.

22. Gather and label as Test #12 all output criteria; journal entries, console printouts, Stat 2's and completed CPU results.

3.3.13   Test Scenario #13

PURPOSE:

1. Measure system performance and CPU while exercising two 4800 baud ASC circuits, two 4800 baud Mode I terminals, 75, 150, and 300 LPM printer terminals, two KVDT's, local message distribution, two OCR's, three magnetic tape customers (output), one magnetic tape input, WWMCCS, Mode II (50 and 75 baud) and two Dynatest 2000's.

2. Objective line blocks; 212,880

TEST INPUT

ATAPE #1, ATAPE #2, ATAPE #3, ATAPE #4, DTAPE #2, STAPE #1, WTAPE #1, Mode I-OCR Batch #1, Mode I-OCR Batch #2, SRT-OCR Batch #1, KVDT Batch #1, AFAMPE-OCR Batch #1, FLASH #1, and AFAMPE Miscues.

TEST OUTPUT:

Journal entries, console printouts, Stat 2's, and completed CPU results.

PRETEST PROCEDURES:

1. To build a queue for the AFAMPE circuit at the ASC, mount and transmit ATAPE #2 and ATAPE #3 directly to the ASC. Request the ASC take action to place these messages on the AFAMPE queue for later transmission.

2. The AFAMPE is loaded and ready for traffic.

3. Qualified operators are on duty.

4. The three magnetic tape stations are on load point and have been assigned.

5. Two ASC circuits, SRT, DCT9000 and WWMCCS are ready for testing.

SYSTEM CONFIGURATION:

1. Standard two processor.

2. 75, 150 and 300 LPM printers are connected to the AFAMPE.

3. An OCR is connected to the AFAMPE.

4. Two KVDT's is connected to the AFAMPE.

5. The Mode I-OCR is connected to the AFAMPE.

6. Three magnetic tape controllers are connected to the AFAMPE.
   NOTE: When assigning the magnetic tape functions, assign
   three separate controllers rather than one controller and
   three servos.

7. The SRT is connected to the AFAMPE.

8. The Mode II (50 and 75 baud) circuits are connected to the
   AFAMPE.

9. The DCT9000 is connected to the AFAMPE.

10. The CPU measuring device is connected to processor "A" and
    set to record utilization at one minute intervals.

11. The WWMCCS is connected to the AFAMPE.

12. The Dynatest 2000's are connected to the AFAMPE and ready for
    use.

TEST PROCEDURES:

1. Initialize CPU monitoring device.

2. Initiate Stat 2.

3. Mount and start input of ATAPE #1.

4. At the DCT9000, mount and start input of DTAPE #2.

5. At the SRT, mount and start input of STAPE #1. When it
   completes and rewinds, read in SRT-OCR Batch #1.

6. At the AFAMPE "set in" two ASC circuits, SRT, DCT9000, Mode
    II terminals, WWMCCS and the 75, 150 and 300 LPM printers
    terminals.

7. Request the ASC place in service the AFAMPE circuits.

8. Place in service the AFAMPE circuit at the DCT9000.

9. Place in service the AFAMPE circuit at the SRT.

10. Place in service the AFAMPE circuit at the WWMCCS.

11. Verify message flow.

12. Initiate Stat 2's at 10 minute intervals.

13. Start transmission of the prepared traffic at the Mode II
    devices. (To include Dynatest 2000's).

14. At T plus 10 minutes transmit Mode I-OCR Batch #2.

15. At T plus 15 minutes input at the AFAMPE "AFAMPE MISCUES".

16. At T plus 20 minutes mount and start input of WTAPE #1 at the
    WWMCCS.

17. At T plus 25 minutes transmit KVDT Batch #1 via two KVDT's.

18. At T plus 25 minutes mount and transmit from the AFAMPE ATAPE
    #2.

19. At T plus 30 minutes transmit AFAMPE-OCR Batch #1.

20. At T plus 35 minutes transmit from the DCT9000, FLASH #1.

21. At T plus 40 minutes transmit ATAPE #4.

22. Terminate this test and CPU monitoring device after three
    hours or when all messages have processed, whichever first.

23. Initiate final Stat 2.

24. Gather and label as Test #13 all output criteria; journal
    entries, console printouts, Stat 2's and completed CPU
    results.

SECTION 4 - PTP MANAGEMENT PLAN

This section describes the management approach for the successful completion of the AFAMPE's performance test plan. The following subsections discuss definition of responsibility, test schedule, test controls, and reporting requirements.

4.1 DEFINITION OF RESPONSIBILITY

It is the responsibility of the PMO to designate a person as Test Director with the authority to act on their behalf. Consequently, it is the Test Director's responsibility to form a test team, make work assignments, and delegate his authority as necessary. The following is a list of areas critical to the successful completion of the overall project. Assignments to these areas should be performed as early as possible during the preparatory stages of the project. Areas are as follows:

o   creation and procurement of test data

o   scheduling and procurement of hardware necessary for each test scenario

o   coordination of test time between all parties involved

o   allocation of functions to groups or individuals within the test team

o   overall project scheduling.

4.2 TEST SCHEDULE

It is estimated that the proposed PTP will take about 10 consecutive days of dedicated test time. However, due to scheduling conflicts and other commitments, the probability of obtaining 10 consecutive days of test time at AFCCPC is remote. Accordingly, the test scenarios have been designed and developed to allow a multileveled testing process which may be accomplished concurrent with AFAMPE system development. The scheduling of these test levels will be by mutual agreement of the PMO, CSC, and AFCCPC. A description of the test levels follows:

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o   LEVEL 1:   AFCCPC personnel will exercise selected
scenarios during different stages of system development.
The results will be maintained for later analysis and
verification.

o   LEVEL 2:   Selected scenarios from previous test will be
exercised and matched against previous results to ensure
test integrity.   Once accomplished, additional scenarios
will be applied to ensure individual site performance
requirements are met as outlined in reference 1 of the
related documents subsection.   This level of testing will
be performed by the test team in the presence of the Test
Director and with assistance from CSC personnel.

o   LEVEL 3:   Once acceptable results have been obtained from
the Level 2 process the AFAMPE will be tested by applying
a complete test cycle as described in Section 3 of this
document.   This final test level, once successfully
completed, will provide the necessary documentation to
satisfy MOP 165 requirements and provide a level of
assurance for future growth of the system not presently
envisioned.

APPENDIX A - FORMS

TEST SCENARIO_____   TEST CONDUCTOR_____

IDLE CPU _____   TIME:_____

MAXIMUM LOAD CPU..... _____   TIME:_____

REMARKS: Note changes in CPU as I/O devices and/or circuits are
         added or deleted during the Test Scenario.

   EXAMPLE: CPU went from 35% to 68% when two KVDT's were
                 activated at 2691428.

Communications Processor Utilization (CPU) Log

FILMED

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