



**LEVEL** *W*

**OPERATIONS RESEARCH REPORT**

*14* AFCC-17-ORR-80 *4*

*9* Final rept.

*6* AFCC

C<sup>3</sup> P<sup>2</sup> / MCAP

STAFF STUDY.

*10* David L. Reusser

*11* MAY 1980

*1230*

PREPARED BY:

STUDIES & ANALYSIS  
HQ AIR FORCE COMMUNICATIONS

COMMAND

SCOTT AFB, ILLINOIS 62225

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|--|--|---|----------------------------------|
| 1. REPORT NUMBER<br>17-ORR-80  | 2. GOVT. ACCESSION NO.<br>AD-A090490         | 3. RECIPIENT'S CATALOG NUMBER                               |                                  |
| 4. TITLE (and Subtitle)<br>AFCC C <sup>3</sup> P <sup>2</sup> /MCAP Staff Study  | 5. TYPE OF REPORT & PERIOD COVERED<br>Final  |   | 6. PERFORMING ORG. REPORT NUMBER |
|  | 7. AUTHOR(s)<br>David L. Reusser, Capt, USAF |   | 8. CONTRACT OR GRANT NUMBER(s)   |
| 9. PERFORMING ORGANIZATION NAME AND ADDRESS<br>Management Studies Division<br>Studies & Analysis<br>HQ AFCC, Scott AFB IL 62225  |  | 10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS |                                  |
| 11. CONTROLLING OFFICE NAME AND ADDRESS  |  | 12. REPORT DATE<br>May 1980                                 | 13. NUMBER OF PAGES<br>30        |
| 14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)  |  | 15. SECURITY CLASS. (of this report)<br>Unclassified        |                                  |
|  |  | 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE                  |                                  |
| 16. DISTRIBUTION STATEMENT (of this Report)<br>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)<br>C <sup>3</sup> P <sup>2</sup> Communications Planning<br>MCAP<br>Planning Interrelationships<br>ADP Planning   |  |   |                                  |
| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number)<br>The separate communications (C <sup>3</sup> P <sup>2</sup> ) and ADP (MCAP) planning processes within AFCC were studied to determine interrelationships and inconsistencies. The specific problem treated was the need to develop a systematic, formal cross reference between the C <sup>3</sup> P <sup>2</sup> and MCAP. The study concludes that the process for developing the MCAP and C <sup>3</sup> P <sup>2</sup> has far reaching implications both within AFCC and the entire USAF. The conclusion is also drawn that the best solution possibilities for resolving conflict between the MCAP and C <sup>3</sup> P <sup>2</sup> processes lie |  |   |                                  |

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within the power of HQ USAF/XOK/ACD to develop and implement.



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DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS AIR FORCE COMMUNICATIONS SERVICE  
SCOTT AIR FORCE BASE, ILLINOIS 62225



28 MAY 1980

REPLY TO SA (Capt Reusser, 4775)

SUBJECT CS 19 Jan 80 Tasking to Provide a Staff Study on the AFCC C<sup>3</sup>P<sup>2</sup>/MCAP Processes

TO AFCC/CS

PROBLEM

1. A systematic formal cross-reference process must be developed to reduce the potential for conflict<sup>3</sup> between the AFCC Command and Control Communications Programming Plan (C<sup>3</sup>P<sup>2</sup>) and the AFCC Major Command Automatic Data Processing Plan (MCAP).

FACTORS BEARING ON THE PROBLEM

2. Facts.

a. This study was performed by the Directorate of Studies and Analysis, Management Studies Division. The action officer was selected based on familiarity with<sup>2</sup> the overall AFCC mission, but who had a limited background with both the C<sup>3</sup>P<sup>2</sup> or MCAP processes, to ensure an objective evaluation.

b. In April 1978, the Secretary of the Air Force announced a proposed reorganization of HQ USAF and the realignment of selected separate operating agencies (SOAs). One action, included in the realignment, dissolved the Air Force Data Automation Agency (AFDAA) and aligned its field units under AFCC.

c. The Deputy Commander for Data Automation, AFCC/CD (established 30 Jun 78), directs centralized management of all data automation resources assigned to AFCC, ensures that major commands (MAJCOMs)/SOAs have a readily available source of support for their automatic data processing (ADP) requirements, and it maximizes the use of Air Force ADP resources in order to provide ADP support to the Air Force and other designated agencies as directed by HQ USAF.

d. The Programs Division, AFCC/XOXP, of the Plans and Resources Directorate, is the command focal point for C3 programming. As such, the division is responsible to comply with the Air Staff tasking (AF/XOK Ltr, 17 May 80 with Asst Vice CSAF Ltr, 27 Jun 78 attached) as the Air Force C<sup>3</sup>P<sup>2</sup> Executive Agent for documenting POM year resource requirements Air Force wide.

e. AFR 100-18, USAF Ground Communications-Electronics Planning and Program Management, is applicable to all C-E programming activities in the Air Force and other agencies that acquire C-E facilities and systems through Air Force channels. It provides direction and guidance on programming processes for fixed-ground C-E requirements, including preparing and processing statements of requirements (SORs) and implementation plans. The SOR is the document used to set forth new requirements for fixed-ground C-E facilities or services.

PROVIDING THE REINS OF COMMAND

f. AFR 300-7, Automatic Data Processing Planning, provides the guidance for preparing ADP plans, projected automation requirements (PARs), and MAJCOM/SOA intentions concerning ADP resource requirements. The regulation also provides procedures and guidance for aligning the ADP planning process with planning, programming, and budgeting. PARs are submitted to identify ADP requirements far enough in advance to obtain Air Staff validation and to adjust funding levels through the program objective memorandum (POM) process. PARs identify requirements in the program years (two thru six years from the current fiscal year) while data automation requirements (DARs) are aimed at requirements for the current fiscal year. Even though DARs can be submitted in the out-years in accordance with AFR 300-2, most ADP requirements are identified through PARs because it is unlikely the requirement will receive program approval unless "grass roots" support was obtained in the out-years.

g. The  $C^3P^2$  provides a formalized management approach for translating and integrating validated  $C^3$  requirements into a near term (five-year) fiscally-oriented program that produces visible links to planning.

h. The MCAP forecasts PARs expected to materialize in the period from 2-6 years from the fiscal year in which the plan is published, allowing Air Staff time to plan, program, and budget in advance for ADP resources needed to accomplish those projected requirements.

i. The technological convergence of communications and computers has already begun; as an example, AFCC took the lead on the Air Force Automated Message Processing Exchange (AMPE) and Interservice AMPE. Telecommunications systems are extending and integrating their use of computers for storage of information, conversion of electronic signals from one form to another, switching, and network control. Computers increasingly interconnect through communications networks to provide their users with access to more computing power and sources of information. In fact, AFCC ADP policy now states, "AFCC will converge C-E and ADP planning, programming, requirements processing and governing regulations wherever it contributes to end-to-end systems support for the Air Force."

j. The growing use of information processing in communications systems is due to the dramatic improvements in cost, performance, and the size of computer hardware. An information processing system contains three basic units: the computing or processing unit; memory systems for storing information; and input/output units for maintaining external context. The cost of the information processing and storage units have fallen by a factor of three every two years or so for the past twenty years - a total cost decrease of more than 10,000-fold. This means that a few hundred dollars in 1980 would buy the equivalent computing power of several million dollars in the mid-1950s. The size of processing and storage units have also shrunk by a factor of about 10,000 while their speed (measured in the number of instructions or calculations processed per second) has increased approximately 50,000-fold. These trends are expected to continue at least into the early 1980s.

k. Computer processors have gone through three major technological changes in components; from vacuum tubes to transistors, from transistors to integrated circuits, and from the early forms of integrated circuits to today's large-scale integrated circuits. A computer processor built with large-scale integrated technology is called a micro-processor.

l. Micro-processors are finding their way into communications equipment of all sorts, including switching facilities, typewriters, data terminals, and even the telephone itself. The micro-processor signifies the demise of the centralized computer controlling the equipment connected to it. In its place, "intelligent" terminals and devices distribute logic throughout a communications network and perform complex tasks under the control of their own, built-in micro-processors.

m. A review of computer technology trends suggest that computer developments will strongly influence the technical evolution of telecommunications systems and the communications services they offer.

n. State-of-the-art electronic switches and data terminals already have information-processing capabilities, and equipment built in the 1980s will incorporate increasingly greater computing power. From a technical standpoint, communications and processing functions should often be combined as, for example, in terminals providing remote access to information files or switches that can be programmed to provide data-processing services. These technological changes will cause problems for those who want a clear division between "data communications" and "data processing." Technology will blur this distinction even more in the near future.

o. Intelligent terminals in the office will also lead to some substitution of telecommunications for face-to-face meetings. It is by no means clear to what extent telecommunications may reduce travel, but teleconferencing services are expected to grow significantly in the energy conscious society of the 1980s. A recent study reports that audio conferencing alone is suitable for 22 percent of business meetings that are currently conducted face-to-face. Adding graphic transmission capability would make teleconferencing suitable for an additional 17 percent of business meetings.

### 3. Assumptions.

a. The technological convergence of communications and computers will continue at an ever increasing rate. There are many political, legal, and technological ramifications involved in this convergence, but most parties generally agree that past differences between communications and computers no longer exist.

b. AFCC will assume increasing responsibility for overall management of USAF ADP. AFCC was assigned the task of "administrative consolidation" of MAJCOMs C<sup>3</sup>P<sup>2</sup>s into the USAF C<sup>3</sup>P<sup>2</sup> in 1979. With CD only being established the previous year, coupled with the overall favorable evaluation by the USAF Inspector General of AFCC's role as the C<sup>3</sup>P<sup>2</sup> Air Staff executive agent, it seems only a matter of time until USAF ACD considers conferring executive agent status to the AFCC/CD community for administrative consolidation of MAJCOM MCAPs.

### 4. Criteria

a. Optimize Ease of Customer Input - Since the formation of the CD function at HQ AFCC, users of telecommunications and computers are finding it increasingly necessary to input to both the C<sup>3</sup>P<sup>2</sup> and MCAP processes in order to identify their communications and data automation requirements. Because of the

technological convergence of communications and computers and the need to identify communications support for computers and vice versa, the user is tasked with providing basically the same information to two different systems for a single requirement. This increases user workload, increases redundancy, creates a higher potential for conflict between data in the two documents, and increases the chance for confusion concerning the requirement. To the degree input can be standardized and simplified, the two documents will benefit through more efficient processing and the reduced possibility of conflicting data.

b. Reduce Potential for Conflict - This was the bottom line of CS's tasking, "... the potential for conflict between our C<sup>3</sup>P<sup>2</sup> and MCAP documents could occur..." Though the 1979 MCAP cross-referenced ADP requirements with the C<sup>3</sup>P<sup>2</sup> and informal procedures were established to reconcile C<sup>3</sup>P<sup>2</sup> requirements with the MCAP, discussions with respective staff officers disclosed last minute cross-referencing was accomplished on a catch-as-catch-can basis. This is due mainly to the administrative mechanics involved in assembling and publishing documents of this nature and the fact there is limited time from when all the requirements are finally assembled and when the finished product has to be forwarded to Air Staff. Once the two documents leave the headquarters, they essentially lose their command identity and are tracked by Program Elements (PEs) by Air Staff Program Element Monitors (PEMs). It is at this point where it is essential that information contained in one document agree with the data in the other if "grass roots" support from the PEM for a particular requirement is expected. It is at this confluence that aspects of C-E and ADP come together in a particular program element to define a single MAJCOM requirement and where the words and numbers will present an accurate picture of that requirement, or on the other hand, lead the PEM to believe the MAJCOM has not done its homework.

c. Reduce Redundancy - With the numerous planning, programming and budgeting documents, any reduction of duplication would certainly increase efficiency and reduce the possibility of conflict between the two requirement processes. In discussing the Military Airlift Command's (MAC) C<sup>3</sup>P<sup>2</sup> and MCAP with their staff officers, the point was made that approximately 30 percent of the C<sup>3</sup>P<sup>2</sup> was automation, while 90 percent of the MCAP appeared in the MAC C<sup>3</sup>P<sup>2</sup>. For AFCC, the figures are approximately 20 and 70 percent respectively, but the main point is that there is considerable redundancy between the documents which could lead to conflict.

d. Avoid Change for Change Sake - The C<sup>3</sup>P<sup>2</sup> and MCAP requirement processes are complex and usually take a couple POM cycles to really understand. Continually changing these processes only adds to that complexity and increases the potential for confusion and conflict.

e. Promote Central Management of Command Requirements - With two independent requirement processes and management structures, there must be some methodology to insure planning, programming, and budgeting are consistent with command objectives.

f. Acceptable to Both Management Structures - Potential conflict resolution between the C<sup>3</sup>P<sup>2</sup> and MCAP can only be accomplished through procedures which benefit both processes, not at the expense of one or the other.

5. Definitions.

See Attachment 1.

DISCUSSION

|                         |                                     |                          |                          |
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6. When initiating the study, the most difficult aspect of trying to compare the two vertical management structures of their respective requirement processes was that AFCC is the Air Staff executive agent for the USAF C<sup>3</sup>P<sup>2</sup>, while there is no corresponding delegation for the MCAP (see Attachment 2). As a result, though the AFCC MCAP was a unique, stand-alone document, the AFCC C<sup>3</sup>P<sup>2</sup> was only one among the various MAJCOM C<sup>3</sup>P<sup>2</sup>s that had to be consolidated into the USAF C<sup>3</sup>P<sup>2</sup>. This made for a difficult comparison of otherwise parallel structures.

a. When comparing the purpose of the two documents (see Attachment 3), the words are somewhat different but the basic underlying principle is the same. Through these documents, the command is attempting to escape from the "reactionary mode" of managing requirements to one where programming and planning are tied together. In fact, the most difficult task in the development of the two documents is projecting out-year requirements linked to planning. Attachment 4 references some of these planning documents which contain C<sup>3</sup>P<sup>2</sup> and MCAP requirements.

b. The timing of the two processes is basically the same (see Attachment 5). Administrative instructions for both documents come out in the April-May timeframe and feedback from the previous years C<sup>3</sup>P<sup>2</sup>/MCAP is received in June; but in order for AFCC to have ample time to assemble and publish the USAF C<sup>3</sup>P<sup>2</sup>, MAJCOM C<sup>3</sup>P<sup>2</sup>s have to be completed in July and forwarded to the Procuring/Implementing Commands for their cost data inputs. The cost data is then incorporated in September and the MAJCOM C<sup>3</sup>P<sup>2</sup>s are completed and ready for final consolidation into the USAF C<sup>3</sup>P<sup>2</sup>. The MAJCOM MCAPs are also completed and forwarded to USAF/ACD in the October timeframe. Requirements prioritization and document cross referencing occur in July for the MCAP and September for the C<sup>3</sup>P<sup>2</sup>.

c. The content of both documents is also basically the same (see Attachment 6). A point of interest is that the information contained in the MCAP follows the PAR format, while the same information in the C<sup>3</sup>P<sup>2</sup> exhibits are not the same as a SOR.

d. After examination of the process, purpose, timing, and content, determination of who actually uses the documents was examined. There are basically two interest groups or levels that use the AFCC C<sup>3</sup>P<sup>2</sup> and MCAP. The PEMs are mainly concerned with the project exhibits of the C<sup>3</sup>P<sup>2</sup> and Sections 3 and 4 of the MCAP. This is where background information, justification, funding profiles, and impact statements help the PEMs develop their briefings for the respective panels. To the extent the MAJCOM can provide comprehensive data on a particular requirement, the easier it is for the PEM to develop a sound, logical presentation, which in turn means a higher probability of panel acceptance. The C<sup>3</sup> panel and the Data Automation Panel (DAP) on the other hand, are more concerned with the command priorities contained in the C<sup>3</sup>P<sup>2</sup> executive summary

and Section 2 of the MCAP. Based on the MAJCOM priority list, the panels determine which requirements will receive funding.

e. Six basic problem areas were identified in the 1979 C<sup>3</sup>P<sup>2</sup> and MCAP.

(1) No formal cross reference structure - Informal procedures were in effect but they were accomplished on a catch-as-catch-can basis.

(2) Common program elements - Both the C<sup>3</sup>P<sup>2</sup> and MCAP contained common PEs without some central management structure to ensure complementary data would be input to both documents.

(3) Redundant information - Both the documents, contained similar information for the same requirement, only reformatted to meet that particular plan's document format.

(4) Both documents are reviewed against each other at Air Staff - This is not a problem in itself, but is a point where the two requirement processes come together in the form of consolidated PEs and a conflict between the two documents would be most visible and detract from command credibility.

(5) Two vertical structures for user - Even though AFCC is responsible for both standardized ADP and C-E requirements, the user has to submit requirements for two different processes to get one requirement.

(6) Two staffs working same issues - The two management structures that support the two requirement processes, oftentimes find the two staffs working the same requirement independent of each other.

f. Five options were developed to address the aforementioned problems and help resolve potential conflict between the two documents.

Option 1 - Leave both documents as they are.

Option 2 - Add AFCC/MCAP as volume to AFCC/C<sup>3</sup>P<sup>2</sup>.

Option 3 - Add AFCC/C<sup>3</sup>P<sup>2</sup> annex to AFCC/MCAP.

Option 4 - Hybrid - single standardized format.

Option 5 - Develop formal cross reference procedures.

(1) Though Option 1 (see Attachment 7) is easiest and probably most palatable to both management structures, it does nothing to resolve the problems and potential conflict that have already been discussed. The AFCC C<sup>3</sup>P<sup>2</sup> and MCAP are both published, then the MCAP is forwarded to USAF/ACD and the C<sup>3</sup>P<sup>2</sup> is consolidated with 15 other C<sup>3</sup>P<sup>2</sup>s by AFCC/XOXP to make up the USAF C<sup>3</sup>P<sup>2</sup>, which then is forwarded to USAF/XOK. As a point of interest, USAF/ACD receives approximately 24 separate documents from MAJCOMs and SOAs. The Automatic Data Processing System (ADPS) Master Plans (AMPs) are developed by the Air Force ADPS managers for standard Air Force systems and are viewed as a "systems perspective" of the MAJCOM MCAPs.

(2) Options 2, 3, and 4 can be discussed together, as they are basically three different ways of attempting to combine the AFCC C<sup>3</sup>P<sup>2</sup> and MCAP into one document which this study calls the Command and Control Communications/Computer Programming Plan - C<sup>4</sup>P<sup>2</sup> (see Attachment 8). Because the two documents would be physically attached, there would be a higher likelihood conflict between requirement data would be more evident, but none of the options would really ease user input workload, reduce redundancy, streamline procedures, or promote central management of command requirements. In addition, the situation would result in a nonstandard input to USAF XOK/ACD. AFCC would still consolidate the 16 C<sup>3</sup>P<sup>2</sup>s into the USAF C<sup>3</sup>P<sup>2</sup> and USAF/ACD would still receive 24 MCAPs the first week of each October. It is also unlikely that either management structure, at least at this time, would be willing to either partially or totally change the format of their respective documents.

(3) Option 5 - Because the main thrust of the staff study was to identify areas of potential conflict between the AFCC C<sup>3</sup>P<sup>2</sup> and MCAP, it seemed most reasonable that identification and resolution of potential conflict between the two documents should occur within the command. Formal cross referencing procedures must be indorsed and directed by USAF XOK and ACD, but internal management actions by HQ AFCC will provide the real solutions to the conflict issue (see Attachment 9). By establishing formal cross reference procedures, requirements would not have to appear in both documents, thus reducing redundancy and easing user input workload, while reducing the potential for conflict by having only one set of data for a particular requirement. The internal actions would promote the central management of command requirements and the overall benefits that would accrue through these actions, coupled with the cross reference procedures, should validate the need for change.

g. As the study unfolded and potential problems were identified, corrective actions were already either implemented or in the planning/coordination stage. These "intervening events" were evidence that potential problems had already been identified and corrective actions initiated. Both the draft AFR 100-5 (C<sup>3</sup>P<sup>2</sup>) and AFR 300-7 (MCAP) are incorporating language to alert users of C-E and ADP of cross reference obligations between the two requirement processes. USAF/XOK (C<sup>3</sup>P<sup>2</sup>) and ACD (MCAP) had rewritten the administrative instructions for the respective documents so when a C-E or ADP requirement was identified, described, and justified in one document, that requirement did not have to be described and rejustified in the other document, as long as the requirement was cross referenced to the original document by page and paragraph number to reflect the total resource involvement of the project. Obviously because both documents are used mainly by the PEMs, the document being referenced had to be available to the Air Staff PEMs. AFCCR 300-12, Procedures for Requesting and Managing Data Automation Requirements, which is in the draft stage, describes policy and procedures for processing ADP requirements submitted under the AF 100-series directives. But of all the "intervening events" proposed or being implemented, the one that has the most impact on the outcome of this staff study is the draft AFCCR 27-X, Program Evaluation Group (PEG) Structure, regulation.

h. All DOD forces, units, and activities fall under major force programs (MFP). These are very broad designations (see Attachment 10) and are used primarily at the very highest levels within the DOD. The DOD arrays each MFP with a series of PEs for use by the military departments and other defense agencies

for defining their military and support activities for a five year period. Therefore, each Air Force unit or activity falls under a specific PE. There are over 1600 PEs in DOD and over 550 assigned to the Air Force. The basic reporting level in the AFCC C<sup>3</sup>P<sup>2</sup> and MCAP is the PE. Because of continual force structure changes, the funds and manpower required to maintain the forces, units, and activities represented in the PEs and sub-elements must be reviewed on an annual basis. During this review, and based on forecasted, anticipated, or known changes, resource requirements must be programmed/budgeted as far in advance as possible. The C<sup>3</sup>P<sup>2</sup> and MCAP, using the PE structure and a near-term future projection format, provide the means to accomplish this annual resource requirement review and forecast.

i. There are 15 PEs (see Attachment 11) in which AFCC has identified command requirements. Seven of these PEs are common to both the C<sup>3</sup>P<sup>2</sup> and MCAP, while six are unique to the C<sup>3</sup>P<sup>2</sup> and two are unique to the MCAP. Through these PEs, AFCC requirements continue through the POM process, though their command identity has fallen away. Though command requirements are identified in only 15 of the PEs, AFCC has resources, mainly manpower, identified in over 90 PEs, which increases the potential for confusion and conflict between the two documents when considering the numerous sources inputting the two documents (see Attachment 12) without some structure that can adequately influence both requirement processes.

j. AFCCR 27-X gives the command that influencing factor. Just as at Air Staff, this regulation sets up an AFCC PEM structure to provide central management of all command requirements (see Attachment 13). Using this methodology, AFCC will have its own experts on the individual PEs so there will be some PEM responsible for advocating and monitoring the respective elements throughout the entire cycle. PEM training was initiated the week of 12 May 80 and AFCCR 27-X should be finalized and published by the end of summer 1980.

k. Though AFCCR 27-X appears to go farthest at resolving conflict between the two requirement processes and management structures, this resolution will occur only after ADP considerations have been added to the initial draft. Though the regulation will set up a single command requirement priority list, it will have little effect if no provisions are included to input the AFCC MCAP and AMPs. With inclusion of these ADP considerations, the end result will ensure computer and communications support for AFCC high-priority requirements and requirement priorities will be complementary and consistent between the AFCC C<sup>3</sup>P<sup>2</sup> and MCAP.

#### CONCLUSION

7. Both the AFCC C<sup>3</sup>P<sup>2</sup> and MCAP processes have far reaching implications not only for the future of AFCC, but also for the entire Air Force. During the course of the study, it was apparent there were ongoing actions at HQ USAF and AFCC to reduce the potential conflict that could occur between the two documents. The best solution to resolving this potential conflict was HQ USAF/XOK/ACD actions to establish formal cross reference procedures and implementation of HQ AFCCR 27-X.

#### ACTION RECOMMENDED

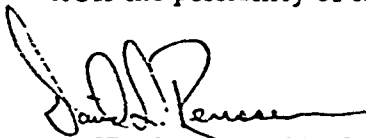
8. AFCC XO and CD continue efforts to resolve potential conflict between the AFCC C<sup>3</sup>P<sup>2</sup> and MCAP through consistent and complementary language in both documents and also in the following:

AFR 100-5 (C<sup>3</sup>P<sup>2</sup>)  
AFCCR 27-X

AFR 300-7 (MCAP)  
AFCCR 300-12

9. CS sign letter of transmittal providing results of this staff study to AFCC/XO and CD.

10. Based on research fallout (Annex I), that extends beyond the basic scope of the original tasking, AFCC/XO and CD should consider pursuing with USAF/ACD and XOK the possibility of improving the current parallel management structures.



DAVID L. REUSSER, Capt, USAF  
Management Studies

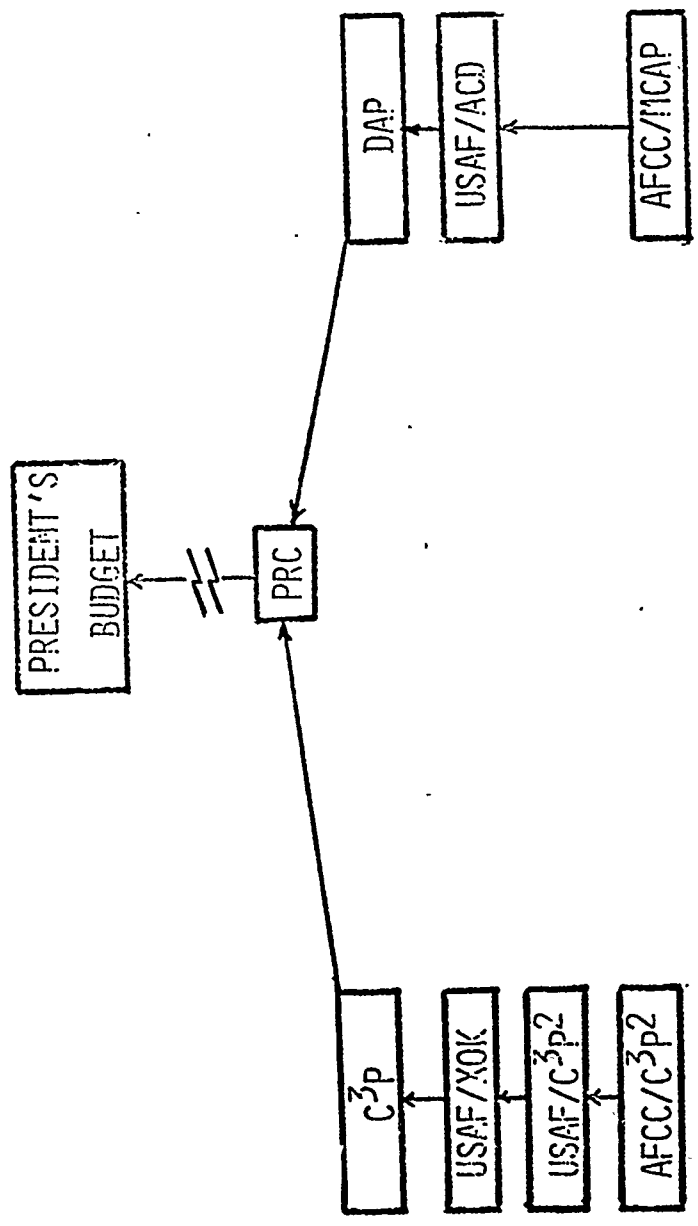
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- 1. Definitions
- 2. Processes
- 3. Purpose
- 4. Links to Planning
- 5. Timing
- 6. Content
- 7. Option 1
- 8. Options 2, 3, & 4
- 9. Option 5
- 10. Major Force Programs
- 11. Program Elements  
Current System
- 13. Draft AFCCR 27-X, Program  
Evaluation Group (PEG) Structure
- 14. Annex I

## DEFINITIONS

|                               |  |        |   |
|-------------------------------|--|--------|---|
| ADP                           | Automatic Data Processing                            | CDIP   | Consolidated Defense Intelligence Program                   |
| ADPE                          | Automated Data Processing Equipment                  | CCP    | Consolidated Cryptologic Program                            |
| ADPS                          | Automated Data Processing System                     | DAR    | Data Automation Requirement                                 |
| ADPX                          | ADP Exhibits   | DCA    | Defense Communications Area                                 |
| AFADPP                        | Air Force ADP Plan                                   | DECCO  | Defense Commercial Communications Office                    |
| AFCAC                         | Air Force Computer Acquisition Center                | DPD    | Data Project Directive                                      |
| AFCCPC                        | Air Force Communications Computer Programming Center | DPI    | Data Processing Installations                               |
| AFDSC                         | Air Force Data Services Center                       | DPP    | Data Project Plan   |
| AFDSDC                        | Air Force Data System Design Center                  | ECA    | European-Communications-Area                                |
| AFDSEC                        | Air Force Data Systems Evaluation Center             | EEIC   | Element of Expense/Investment Code                          |
| AMP                           | ADPS Master Plan                                     | E&I    | Engineering and Installation                                |
| AMIG                          | ADP Management Information System Guidance           | EIMS   | Engineering/Installation Management System                  |
| AMIS                          | ADP Management Information System Submission         | FEDSIM | Federal Computer Performance Evaluation & Simulation Center |
| AUTODIN                       | Automatic Digital Network                            | FYDF   | Five Year Defense Program                                   |
| BUD                           | Air Force Budget                                     | GSA    | General Services Administration                             |
| CEM                           | Communications Electronic Meteorological             | H6060  | Honeywell 6000 Series Computer System                       |
| COMM                          | Communications                                       | IDHS   | Intelligence Data Handling System                           |
| COMSEC                        | Communications Security                              | MAJCOM | Major Command   |
| C <sup>3</sup> P <sup>2</sup> | Command and Control Communications Programming Plan  | MCAP   | Major Command ADP Plan                                      |
| CPU                           | Central Processing Unit                              |        |   |

|       |   |         |   |
|-------|---|---------|---|
| MEP   | Management Engineering Program              | SCA     | Southern Communications Area                  |
| NCA   | Northern Communications Area                | SOA     | Separate Operating Agency                     |
| OSD   | Office of the Secretary of Defense          | SOR     | Statement of Requirements                     |
| PAR   | Projected Automation Requirements           | SOW     | Statement of Work                             |
| PBD   | Program Budget Decision                     | TACCA   | Tactical Air Command Communications Area      |
| PCA   | Pacific Communications Area                 | TCCF    | Tactical Consolidated Communications Facility |
| PCSP  | Programmed Communications Support Program   | TERPS   | Terminal Instrument Procedures                |
| PDM   | Program Decision Memorandum                 | TRACALS | Traffic Control & Landing System              |
| PMO   | Program Management Office                   | TSR     | Telecommunications Service Request            |
| POC   | Point of Contact                            | TSS     | Time Sharing System                           |
| POM   | Program Objective Memorandum                | WIN     | WWMCCS Intercomputer Network                  |
| PPBS  | Planning, Programming, and Budgeting System | WPE     | Word Processing Equipment                     |
| PPGM  | Planning Programming Guidance Memorandum    | WPC     | Word Processing Center                        |
| SACCA | Strategic Air Command Communications Area   |         |   |

PROCESS



PURPOSE

C<sup>3</sup>p2

PROVIDE A FORMALIZED MANAGEMENT APPROACH FOR TRANSLATING AND INTEGRATING VALIDATED C<sup>3</sup> REQUIREMENTS INTO A NEAR TERM (5 YEAR) FISCALLY-ORIENTED PROGRAM THAT PRODUCES VISIBLE LINKS TO PLANNING.

MCAP

FORECAST PROJECTED AUTOMATION REQUIREMENTS (PARS) EXPECTED TO MATERIALIZE IN AFCC IN THE PERIOD FROM TWO THROUGH SIX YEARS FROM THE FISCAL YEAR IN WHICH THE PLAN IS PUBLISHED, ALLOWING AIR STAFF TIME TO PLAN, PROGRAM, AND BUDGET IN ADVANCE FOR ADP RESOURCES NEEDED TO ACCOMPLISH PROJECTED REQUIREMENTS

LINKS TO PLANNING

|   |   |
|---|---|
| PROGRAM MANAGEMENT DIRECTIVES (PMD)             | PLANS   |
| STATEMENTS OF NEED (SON)                        | COMSEC EQUIPMENT PROGRAM (CEP)                      |
| DATA AUTOMATION REQUIREMENT (DAR)               | AF PLANNING GUIDANCE                                |
| BASE COMM-ELECT PLANS (BCEP)                    | PROGRAMMING PLANS (PPLANS)                          |
| USAF TRACALS PLAN                               | USAF PROGRAM, COMM-ELECT (PC)                       |
| USAF PROGRAM, COMM-ELECT SUPPORT PROGRAM (PCSP) | C3P2  |
| MICAP   | COMMAND POM   |
| MILITARY CONSTRUCTION PROGRAM                   | TERMINAL PRECISION APPROACH CONTROL PROGRAM (TPACP) |
| USAF PLAN FOR TELECOM                           | AUTOMATIC DATA PROCESSING SYSTEM (ADPS)             |
| MAJCOM OBJECTIVE PLANS                          | MASTER PLAN (AMP)                                   |

TIMING

|  | APR | MAY | JUN            | JUL  | AUG         | SEP       | OCT                                | NOV |
|--|-----|-----|----------------|--|-------------|-----------|------------------------------------|-----|
|  |     |     |                | C <sup>3</sup> P <sup>2</sup> DEVELOPED    | COST DATA   | AFCC      | USAF C <sup>3</sup> P <sup>2</sup> |     |
|  |     |     | & VALIDATED    | INCORPORATED C <sup>3</sup> P <sup>2</sup> |             | FORWARDED |                                    |     |
|  |     |     | COPIES TO      | COMPLETE                                   | TO USAF/XOK |           |                                    |     |
|  |     |     | PROCURING      | REQUIREMENTS                               |             |           |                                    |     |
|  |     |     | & IMPLEMENTING | PRIORITIZED                                |             |           |                                    |     |
|  |     |     | COMMANDS FOR   |  |             |           |                                    |     |
|  |     |     | COST DATA      | MCAP CROSS-                                |             |           |                                    |     |
|  |     |     |                | REFERENCE                                  |             |           |                                    |     |
|  |     |     | ADMINISTRATIVE | FEEDBACK                                   |             |           |                                    |     |
|  |     |     | INSTRUCTIONS   | PREVIOUS                                   |             |           |                                    |     |
|  |     |     | TO ALL         | YEAR'S                                     |             |           |                                    |     |
|  |     |     | MAJCOMS        | C <sup>3</sup> P <sup>2</sup> /            |             |           |                                    |     |
|  |     |     |                | MCAP                                       |             |           |                                    |     |
|  |     |     |                | REQUIREMENTS                               |             |           | AFCC                               |     |
|  |     |     |                | PRIORITIZED                                |             |           | MCAP                               |     |
|  |     |     |                | C <sup>3</sup> P <sup>2</sup> CROSS-       |             |           | COMPLETE                           |     |
|  |     |     |                | REFERENCE                                  |             |           | FORWARDED                          |     |
|  |     |     |                |  |             |           | TO: IISAF/ACT                      |     |

C<sup>3</sup>P<sup>2</sup>

MCAP

CONTENT

C3p2

PAR #: \_\_\_\_\_ ADPS/ADS: \_\_\_\_\_

MAJCOM: \_\_\_\_\_ PRIORITY: \_\_\_\_\_ PEC: \_\_\_\_\_

TITLE: \_\_\_\_\_

ISSUE: \_\_\_\_\_

CAUSE: \_\_\_\_\_

ALTERNATIVE: \_\_\_\_\_

BENEFITS: \_\_\_\_\_

IMPACT: \_\_\_\_\_

APPROVAL ACTIONS/  
PLANS

MILESTONES: \_\_\_\_\_

MAJCOM: \_\_\_\_\_

TITLE: \_\_\_\_\_

DESCRIPTION: \_\_\_\_\_

JUSTIFICATION: \_\_\_\_\_

MISSION IMPACT: \_\_\_\_\_

APPROVAL STATUS: \_\_\_\_\_

APPROVAL DOCUMENT: \_\_\_\_\_

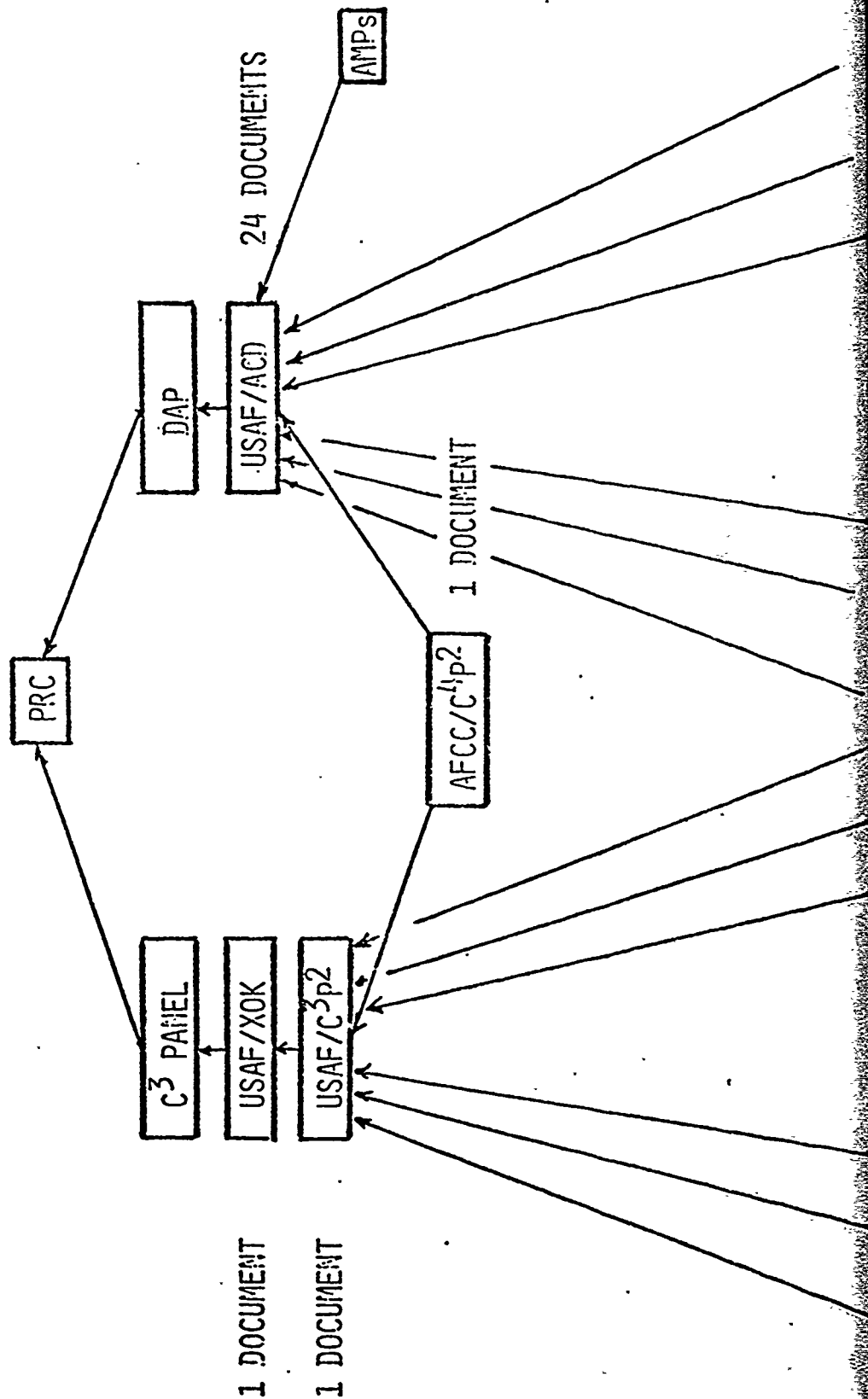
MILESTONE SCHEDULE: \_\_\_\_\_

FUNDING PROFILE

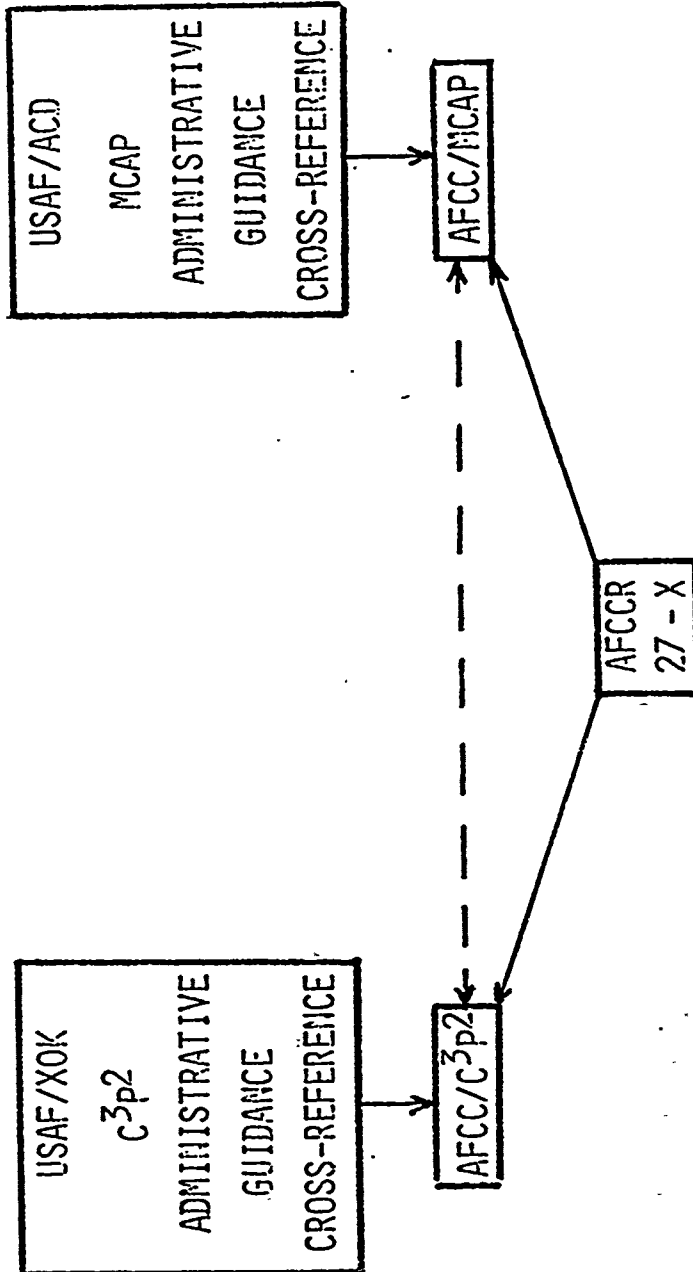
COST DETAIL



OPTIONS 2, 3, AND 4



OPTION 5



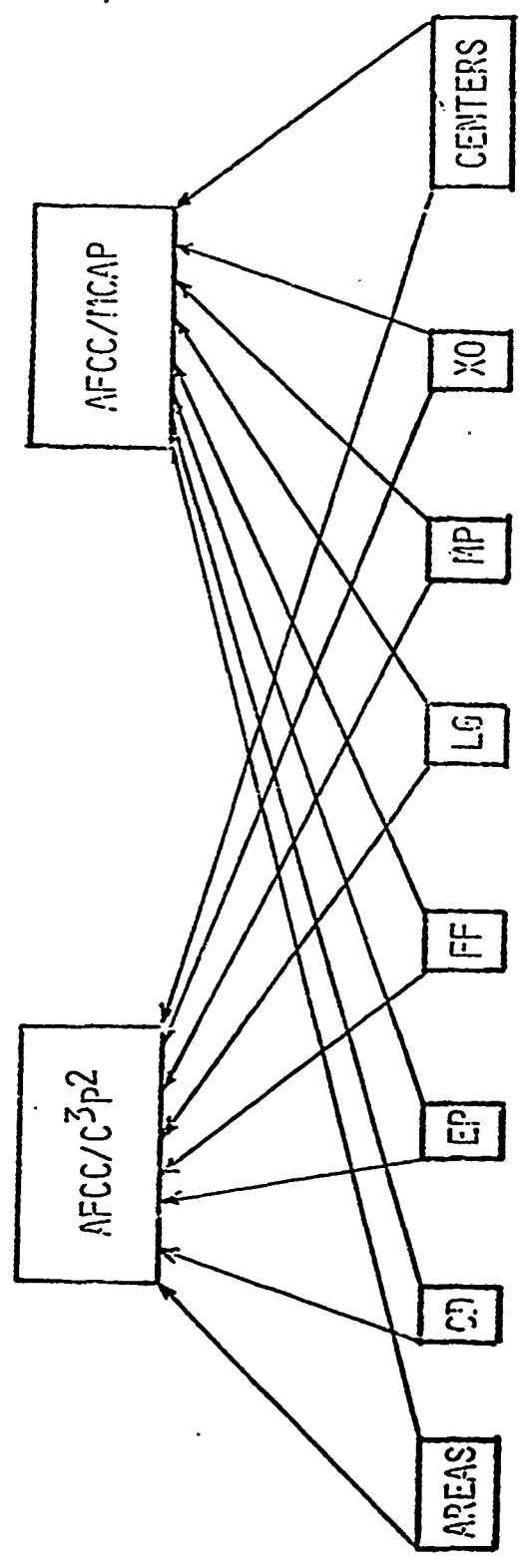
MAJOR FORCE PROGRAMS (MFPs)

- | MFP |  |
|-----|--|
| 1   | STRATEGIC FORCES                         |
| 2   | GENERAL PURPOSE FORCES                   |
| 3   | INTELLIGENCE AND COMMUNICATIONS          |
| 4   | AIRLIFT AND SEALIFT                      |
| 5   | GUARD AND RESERVE                        |
| 6   | RESEARCH AND DEVELOPMENT                 |
| 7   | CENTRAL SUPPLY AND MAINTENANCE           |
| 8   | TRAINING, MEDICAL                        |
| 9   | ADMINISTRATION AND ASSOCIATED ACTIVITIES |
| 10  | SUPPORT OF OTHER NATIONS                 |

PROGRAM ELEMENTS

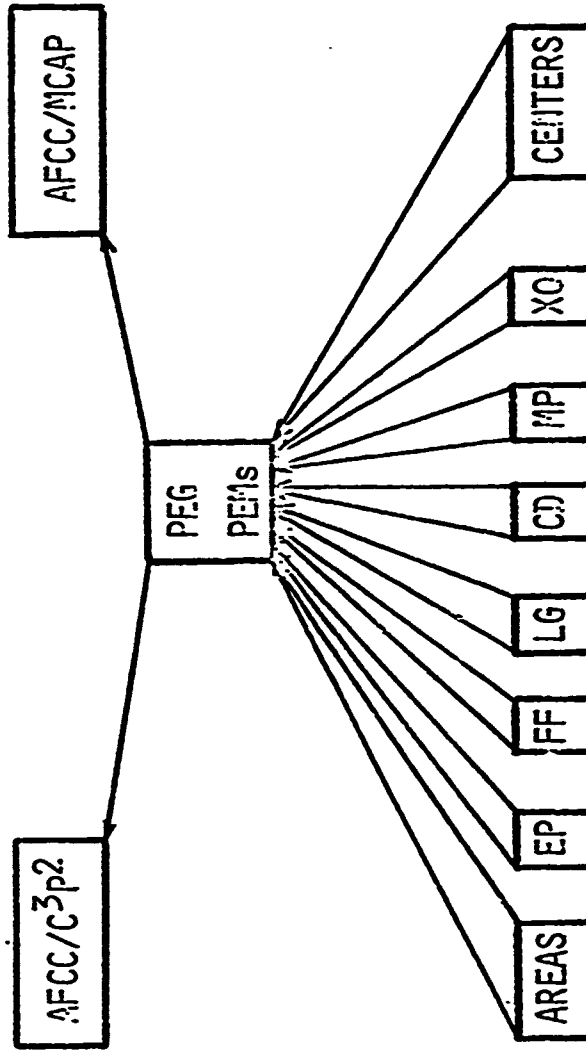
|             |               |             |
|-------------|---------------|-------------|
| <u>C3p2</u> | <u>COMMON</u> | <u>MCAP</u> |
| 27412       | 33112         | 33151       |
| 27422       | 33126         | 91212       |
| 28010       | 33998         |             |
| 33110       | 35114         |             |
| 33601       | 35123         |             |
| 35117       | 35124         |             |
|             | 35198         |             |

CURRENT SYSTEM



AFCCR 27-X

PROGRAM EVALUATION GROUP (PEG) STRUCTURE  
PROGRAM ELEMENT MONITORS (PEMs)



## ANNEX I

1. When the staff study was first initiated, and documents were being researched, this forward from the 1979 MCAP seemed to capture the essence of what this staff study was all about.

MCAPs and C<sup>3</sup>P<sup>2</sup>s, and SORs and DARs are all only similar sets of data on pieces of paper with different names at the top and fostered by traditional management hierarchies. One planning process or one requirements process or one acquisition process or, for that matter, one management structure is not pushing the boundaries of anything except, not doing business in the most optimal fashion.

2. As the staff study progressed, initial steps at examining methods of combining the AFCC C<sup>3</sup>P<sup>2</sup> and MCAP were abandoned as it was evident they were products of two much larger parallel management structures that realistically resist any major sweeping changes. However, as C-E and ADP technologies continue to converge, it is only rational and logical to conclude that the management structures that provide the policy and procedures for these two technologies will also come closer together, whether by design or default.

3. Stage 1 (Atch 1) is where the management structures are today. Users of C-E and ADP select among multiple requirement documents to input one of the two management structures, both at one MAJCOM. The other noticeable difference is that there is no parallel equivalent with the USAF C<sup>3</sup>P<sup>2</sup>, which AFCC acts as Air Staff executive agent. On one side of this structure all 16 C<sup>3</sup>P<sup>2</sup>s are consolidated by AFCC into one USAF C<sup>3</sup>P<sup>2</sup> which is forwarded to USAF/XOK, while on the other side, all 24 MCAPs and AMPs are sent directly to USAF/ACD.

4. In Stages 2 and 3 (Atch 2), it is hypothesized that either a single requirement document will evolve or USAF/ACD will confer Air Staff executive agent status to AFCC/CDX to administratively consolidate all MCAPs and AMPs into a USAF MCAP. The precedent has been set on the C<sup>3</sup>P<sup>2</sup> side of the house and the result would be a more uniform parallel management structure. The single requirement document would reduce redundancy, standardize requirement formatting, and overall provide the user with a more efficient and effective manner of identifying requirements.

5. Stage 4 (Atch 3) would be a natural outgrowth of Stages 2 and 3. Once AFCC had mastered the USAF MCAP process (probably two POM cycles), and the single requirement document was the standard for both documents, it would seem only natural that both documents would be combined into one document, possibly called the Command and Control Communications/Computer Programming Plan (C<sup>3</sup>P<sup>4</sup>). During the interim, C-E and ADP would continue to converge and past differences would continue to blur.

6. In Stage 5 (Atch 4), it would seem only natural that the C<sup>3</sup> Panel and Data Automation Panel would start meeting in joint session to consider those requirements where C-E and ADP were common. Though there was some thought given to the efficiency of collapsing USAF/XOK and ACD together, the political reality of bureaucratic processes would make this a highly unlikely consideration.

7. Robert J. Ringer, a noted writer on management processes wrote,

Reality is not the way you wish things to be, nor the way they sometimes appear to be, but the way they really are. Either you acknowledge reality and use it to your benefit, or it will automatically work against you.

To the extent we as a command accept the reality of the technological convergence between C-E and ADP, to that extent AFCC will be going about the business of the Air Force in the most effective and efficient way.

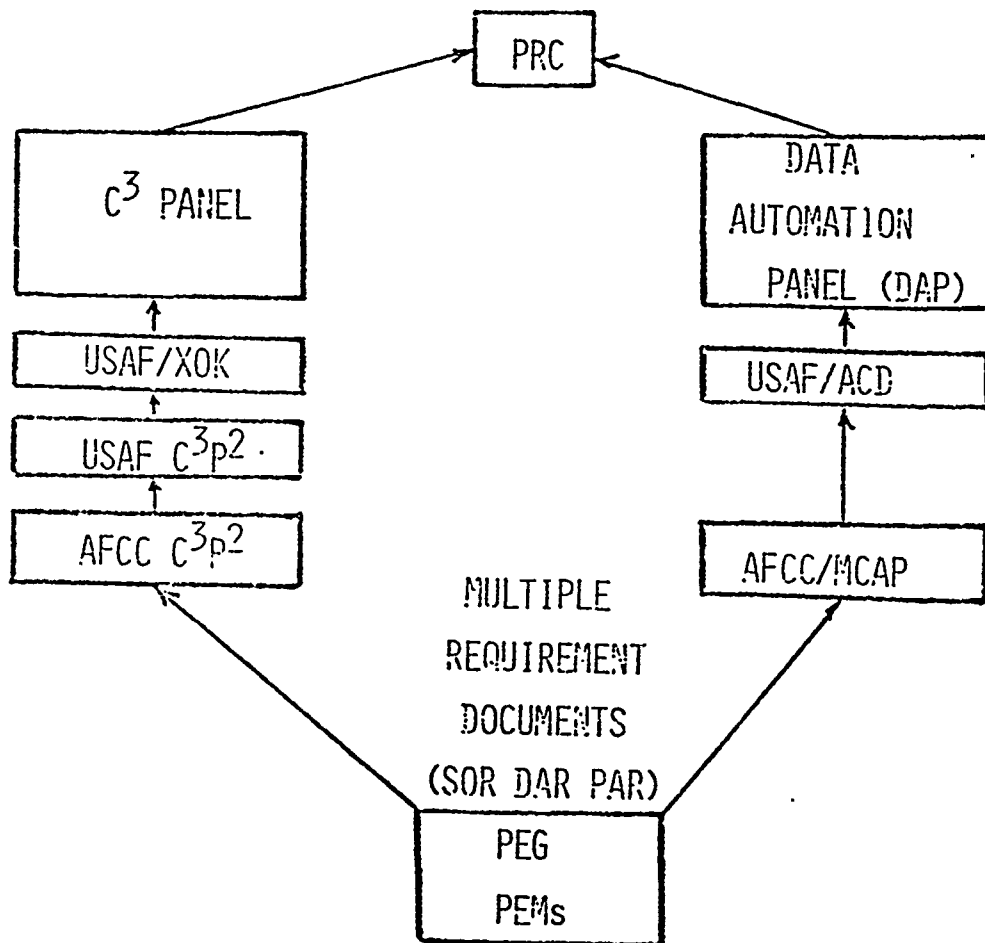


DAVID L. REUSSER  
Management Studies

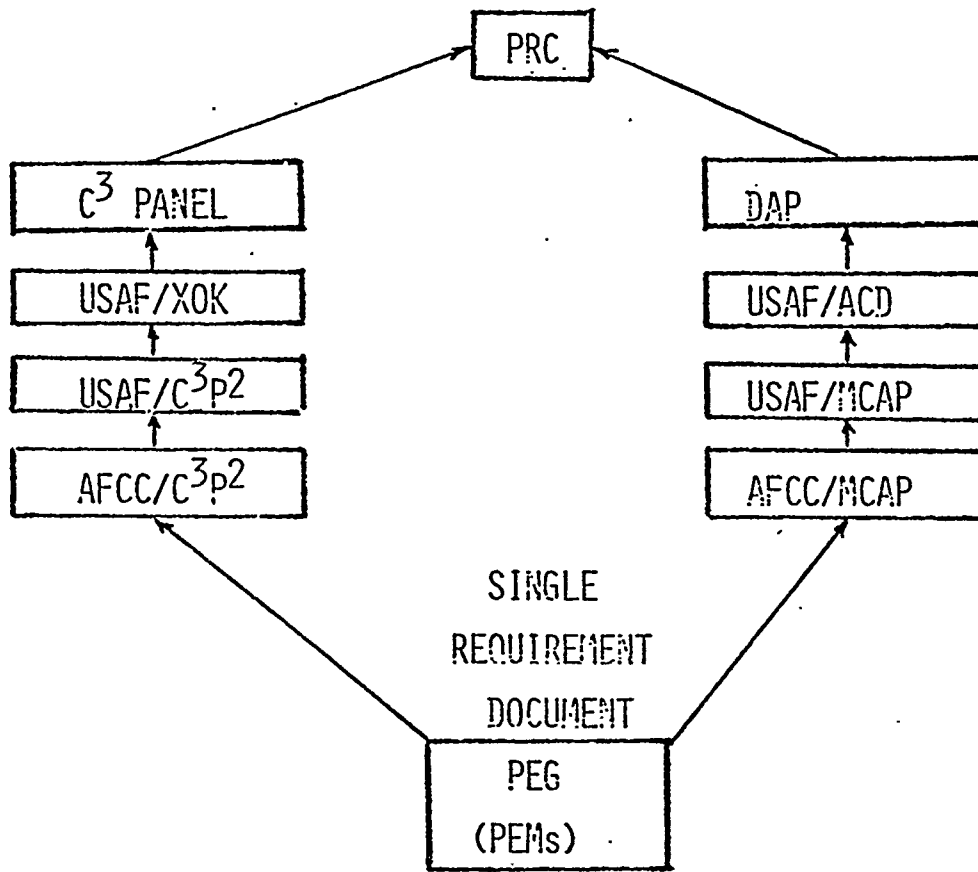
4 Atch

1. Stage 1
2. Stages 2 & 3
3. Stage 4
4. Stage 5

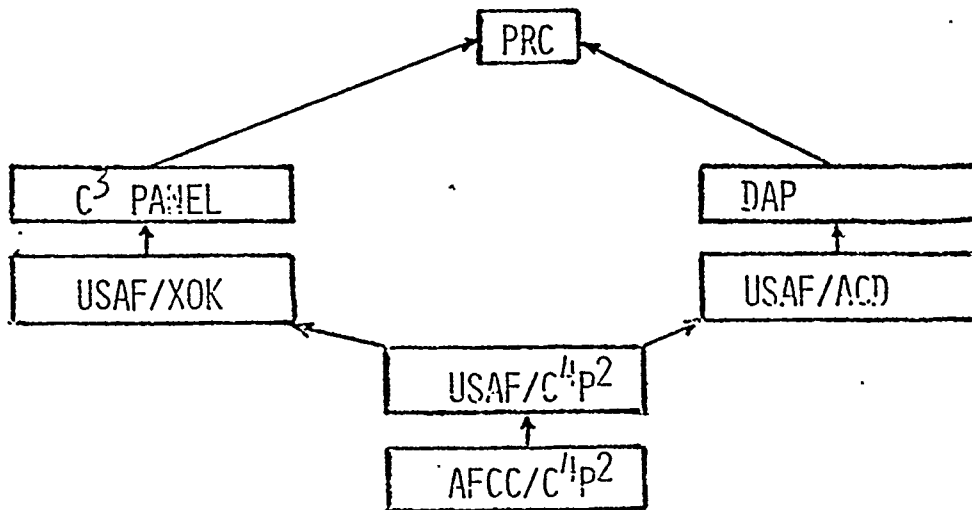
STAGE 1



STAGES 2 AND 3



STAGE 4



STAGE 5

