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AIR NATIONAL GUARD

STANDARD BASE LEVEL AUTOMATED DATA SYSTEMS SUPPORT

This pamphlet explains how to request and obtain computer programming support from the National Guard Bureau (NGB). It applies to Air National Guard (ANG) units and members and the NGB directorates and staff when the programming support is for a base level, standard, ANG-wide system.

1. INTRODUCTION. ANG Standard Automated Data Systems (ADS) support is provided by NGB/SC, Command, Control, Communications and Computers Directorate, for all Air Guard base level functional areas. New ADS requests or requests for standardization of software that were written by a functional office, either at base or NGB level must be submitted to NGB/SC using procedures outlined herein. Requests for ADS development and/or maintenance are submitted in accordance with AFI 33-103/ANG Supplement 1, on AF Form 3215, C4 Requirements Document (CSRD). The CSRD is submitted to NGB/SC. Approved ADS CSRDs are developed and maintained by the programming staff of NGB/SC with the requesting functional area's assistance in testing, documenting, training and releasing the ADS to the field.

2. PROCEDURES.

2.1. REQUESTER ANALYZES REQUIREMENT.

2.1.1. If the requirement is for a new ADS, analysis of the requirement should be accomplished before an AF Form 3215 is submitted. This analysis should include:

2.1.1.1. What logical steps are taken in the manual process?

2.1.1.2. What forms are used?

2.1.1.3. What reports must be generated?

2.1.1.4. What systems must this process interface with and at what frequency (yearly, quarterly, monthly, daily)? What data is passed between the systems?

2.1.1.5. What data items must be tracked? What are the characteristics of the data?

2.1.1.6. Are there any validity edits the data must pass?

2.1.1.7. Are there any mathematical calculations to be performed?

2.1.1.8. Is this process to be on-line (screen inputs) or batch?

OPR: ANGRC/SCOS (Ms. C. Barnes) *Certified by: (Col P. S. Kimmel)*
Pages: 6/Distribution: F

2.1.1.9. How often will this system be used - daily, weekly, monthly, quarterly, yearly? How many people will use this system at one time?

2.1.1.10. What main frame, mini and/or personal computers do you have access to?

2.1.1.11. Is it applicable to the entire Air Guard?

2.1.1.12. Is there an existing system in the Air Force or DOD that would satisfy this requirement? If one is known, what modifications, if any, would be needed to fit the requirement?

2.1.2. If the requirement is standardization, maintenance or enhancement of an ADS that wasn't developed by NGB/SC, the following items should be considered in addition to the items listed for new ADS:

2.1.2.1. Is the system documented well enough for another person who is not familiar with the functional area to understand?

2.1.2.2. Is there user documentation? Maintenance documentation? Is there any historical information that was used to develop the system?

2.1.2.3. What changes, if any, are to be made to this system?

2.2. REQUESTER COMPLETES THE CSRD (AF FORM 3215). The CSRD identifies and describes the required capability in functional terms and justifies the need. The local communications unit accomplishes the initial technical assessment. Initial technical assessments provide options to satisfy a requirement. If the requirement deals with a relatively simple problem, the initial technical assessment may be all that is required to form a resolution plan. If the initial technical assessment deals with a complex problem, the CSO may determine a Certified Technical Solution is required. The CSRD serves as the validation and approval document.

2.3. REQUESTER SUBMITS CSRD TO NGB/SC. If the CSRD was completed at base level, it should be submitted to the local supporting communications unit for consideration and validation before submitting it to NGB/SC.

2.4. NGB/SC RECEIVES CSRD. NGB/SC will review the CSRD for compliance with AFI 33-103. NGB/SC will consider the following:

2.4.1. What is the requirement to do, if new, or what does it do now?

2.4.2. Does it fit the ANG, USAF and DOD C4 architecture and interoperability?

2.4.3. What is the operational concept?

2.4.4. What is the maintenance concept?

2.4..5. Why is it needed?

2.4.5.1. Statutory/Regulatory requirement

2.4.5.2. Value added

2.4.5.2.1. Dollar and/or Manpower Savings

2.4.5.2.2. Improved Efficiency/Interoperability

2.4.5.2.3. Deployability

2.4.6. What does it cost?

2.4.6.1. Equipment

2.4.6.2. Leased Circuits

2.4.6.3. Maintenance

2.4.6.4. Manpower

2.4.6.5. Software

2.4.6.6. Training

2.4.7. What is the economic cost/benefits analysis?

2.4.8. Are dollars available to pay for it? If not, is offset available?

2.4.8.1. What money is needed?

2.4.8.2. Who will POM for dollars?

2.4.9. Does USAF or DOD have a existing solution to the requirement available?

2.4.10. What impact would there be if the requirement was disapproved?

3. APPROVAL PROCESS. The CSRD will go to the Base Communications Systems Officer (CSO) for action and routing to the NGB functional OPR for concurrence. Upon concurrence, it will be reviewed by NGB/SC staff for technical solution determination.

4. NGB/SC PROGRAMMER DEVELOPMENT. Once the requirement has been approved, the NGB/SC programming staff will review the requirement and develop a logical flow of the system based on observation of the current manual process, talks with the functional user(s), review of any system analysis, the input and output data, reports and any related edits. The completed logic flow and any prototype screens and reports will be presented to the functional OPR for review and approval. Upon approval of these items, the actual coding of the system will begin. When the system is completed and thoroughly tested by the programming staff, it will be turned over to the functional OPR for testing.

5. TESTING.

5.1. Testing of the system is accomplished at various stages of development and maintenance. During development, the programmer tests system modules to make sure they meet the requirements stated in the request and work well with other related modules. The NGB/SC programmers test the complete system upon completion of development to ensure that all modules interact with each other properly, data flows through the system properly, with all required edits and free of errors, and that the entire system meets the stated requirements. After this testing is completed, the system is turned over to the functional OPR for testing.

5.2. The functional OPR will develop a test plan, according to the format described in DOD STD 7935A, that will be used to test all aspects of the system. Upon receipt of the system, the functional OPR will test the system using the test plan to ensure that it meets all the stated requirements and all areas of the test plan.

5.3. Once the functional OPR is thoroughly satisfied that the system passes all aspects of the test, the system, along with the written test plan, should be released to a few functional users at the bases as a base test. After a predetermined period of time (usually three to six months), if the system passes all aspects of the base test, the system will be released to all the Guard functional users with all the related documentation.

6. DOCUMENTATION.

6.1. Maintenance Manual: The developers of the system are responsible for the system's maintenance manual. This manual should contain all documentation related to the development and maintenance of the system and should be written in accordance with DOD STD 7935A and AFM 171-100. This manual is a living document and will remain with the system throughout its life cycle. The maintenance manual of an Air National Guard standard system is kept updated by the NGB/SC programming staff, as changes occur with the system.

6.2. User's Manual: The functional OPR is responsible for the development of the user's manual. The user's manual should clearly explain how to use the system, showing screens, data layout, processing steps, etc. It should be developed according to DOD STD 7935A and AFM 171-100.

6.3. Operations Manual: NGB/SC develops the operations manual. In some cases, the operations manual and the user's manual can be combined. The operations manual should explain how to load the system on to the host computer, how to backup and restore data and what to do in case of system and/or data loss. It should be developed according to DOD STD 7935A and AFM 171-100.

6.4. Test Plan: The functional OPR is responsible for the development of the system test plan that will be used to test a new system or any modifications to an existing system. This should be developed according to DOD STD 7935A.

7. MAINTENANCE.

7.1. The maintenance of Air National Guard standard systems is done by NGB/SC in accordance with DOD STD 7935A, AFM 171-100 and DOD 8320.1-M-1.

7.2. Any request for modification to an existing system should be submitted to NGB/SC with an explanation of what the modification is to do, what portions of the system would be effected by the modification, the test criteria to test the modification, the priority and the date required for completion of the modification.

7.3. Modifications will be made to the system following the steps described above in development, testing and documentation.

DONALD W. SHEPPERD
Major General, USAF
Director, Air National Guard

OFFICIAL

DEBORAH GILMORE
Chief
Administrative Services