MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

AD-A174 560

①

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED	1b. RESTRICTIVE MARKINGS n/a
2a. SECURITY CLASSIFICATION AUTHORITY n/a	3. DISTRIBUTION / AVAILABILITY OF REPORT Approved for public release;
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE n/a	Distribution is unlimited
4. PERFORMING ORGANIZATION REPORT NUMBER(S) n/a	5. MONITORING ORGANIZATION REPORT NUMBER(S) n/a

6a. NAME OF PERFORMING ORGANIZATION Defense Mapping Agency	6b. OFFICE SYMBOL (If applicable) PAO	7a. NAME OF MONITORING ORGANIZATION n/a
6c. ADDRESS (City, State, and ZIP Code) Washington, DC 20305-3000		7b. ADDRESS (City, State, and ZIP Code) n/a
8a. NAME OF FUNDING / SPONSORING ORGANIZATION DMA Hydrographic/Topographic Ctr	8b. OFFICE SYMBOL (If applicable) PRP	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER n/a

8c. ADDRESS (City, State, and ZIP Code) Washington, DC 20315-0030	10. SOURCE OF FUNDING NUMBERS			
	PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.
	n/a	n/a	n/a	n/a

11. TITLE (Include Security Classification)

Standardization MK 90 Product Specifications

12. PERSONAL AUTHOR(S)
Hawkins, David A.

13a. TYPE OF REPORT Final	13b. TIME COVERED FROM _____ TO _____	14. DATE OF REPORT (Year, Month, Day) 1986, October 8	15. PAGE COUNT 3

16. SUPPLEMENTARY NOTATION
DOD MC&G Conference 8-12 Oct 1986 Washington, DC

17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB-GROUP	FACS
08			FACS/Glossary

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

The Defense Mapping Agency (DMA) is developing a new technology base from which products will be produced in the 1990's. This technology will provide an automated computer-oriented production environment that will continue to provide products that meet the user requirements. A cornerstone of this effort will be the newly structured and standardized product specifications for the 28 MK 90 baseline products. The structure concept is formed by the Feature Attribute Coding Standard (FACS). The FACS is a hierarchical structure that identifies features and related information, called attributes, that are required by the MK 90 products. FACS is a composite of the baseline product's feature and attribute requirements. By adding definitions to the features and attributes, the FACS becomes a glossary thereby adding clarity. From this FACS/Glossary, the individual MK 90 product specifications identify their feature and attribute requirements for specific hardcopy depiction or software containment, therein providing standardization. DMA is currently developing two types of documents to support this cornerstone activity. The first is a DMA Standards document which will contain information

20. DISTRIBUTION / AVAILABILITY OF ABSTRACT ☐ UNCLASSIFIED/UNLIMITED ☒ SAME AS RPT. ☐ DTIC USERS	21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED	
22a. NAME OF RESPONSIBLE INDIVIDUAL David A. Hawkins	22b. TELEPHONE (Include Area Code) 202-227-2502	22c. OFFICE SYMBOL PRP

DD FORM 1473, 84 MAR

83 APR edition may be used until exhausted.
All other editions are obsolete.

DTIC FILE COPY

86 11 25 183

19. Abstract (continuation)

pertinent to all MK 90 products, as in the FACS/Glossary. Second are the product specifications themselves. This will identify the specific requirements necessary to satisfy a particular product. The intent of this paper is to provide a limited understanding of the structure, content and status of the Standards and product specifications development.

STATUS REPORT ON PREPARATION OF

STANDARDIZATION MK 90 PRODUCT SPECIFICATIONS

DAVID A. HAWKINS
DEFENSE MAPPING AGENCY
WASHINGTON, D.C.   20315-0030

ABSTRACT

The Defense Mapping Agency (DMA) is developing a new techno-logy base from which products will be produced in the 1990's. This technology will provide an automated, computer-oriented production environment that will continue to provide products that meet the users requirements. A cornerstone of this effort will be the newly structured and standardized product specifications for the 28 MK 90 baseline products. The struc-ture concept is formed by the Feature Attribute Coding Standard (FACS). The FACS is a hierarchical structure that identifies features and related information, called attributes, that are required by the MK 90 products. FACS is a composite of the baseline product's feature and attribute requirements. By adding definitions to the features and attributes, the FACS becomes a glossary thereby adding clarity. From this FACS/Glossary, the individual MK 90 product specifications identify their feature and attribute requirements for specific hardcopy depiction or software containment, therein providing standard-ization. DMA is currently developing two types of documents to support this cornerstone activity. The first is a DMA Standards document which will contain information pertinent to all MK 90 products, as in the FACS/Glossary. Second are the product specifications themselves. These will identify the specific requirements necessary to satisfy a particular product. The intent of this paper is to provide a limited understanding of the structure, content and status of the Standards and product specifications development.
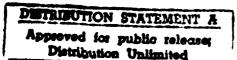
STATUS REPORT ON PREPARATION OF

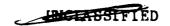STANDARDIZED MK 90 PRODUCT SPECIFICATIONS

Under the direction of Headquarters, Defense Mapping Agency (HO DMA), the Special Program Office for Exploitation Modern-ization (SPOEM) is coordinating the design and development of a new technology base from which 28 selected DMA products will be produced in the early 1990's. This new Mapping, Charting and Geodetic era, referred to as MARK 90 (MK 90), will initially

6 11 25 183   CC 4980

produce 28 baseline hardcopy and digital products. The MK 90 production environment ultimately developed will be computer oriented and as automated as possible. In support of this development, many issue-related working groups have been formed to address and establish critical design criteria. One such group, charged with establishing the cornerstone for MK 90 is called Issue 14. Their specific task is to restructure and standardize the baseline product specifications.

The structure being developed lends itself to data base design and is called the Feature Attribute Coding Standard or more commonly referred to as FACS. FACS is a hierarchical structure that identifies feature and related information, called attributes, that are required by the baseline products. The physical FACS structure consists of a 5 digit alpha-numeric code. Each feature required is assigned a FACS code, where the first two digits identify the main category and subcategory of the feature. The last three digits are the unique numerical identifier of the feature within a subcategory.

Attribute categories and their values are created based on each products individual feature requirements. A particular product may require the feature "Buildings" that are hospitals, while another product requires only buildings that are schools, and yet another product requires only buildings that are warehouses. These three products have a similar requirement in that they all need the feature Building, but each a specific type. These specific product requirements create the need for a Building Function attribute category with the values hospital, school and warehouse. It is through the individual products feature requirements that attribute categories and their values are created.

Through the addition of definitions to the features, attribute categories and values, a glossary is created. The glossary structure is the alphabetical listing of the features with attribute categories and values that are applicable to that feature as required by all the products.

The framework that the FACS/Glossary provides is being used to develop 2 types of documents. First is the DMA Standard. As the name implies, the Standard will contain information pertinent to all baseline products. The following is the proposed format and content for the DMA Standard.

Section 100 will consist of the Glossary. Section 200 will provide a common definition for product accuracy that is applicable to all products. Section 300 will present the graphic symbology that can appear on the hardcopy products. Section 400 contains product generation rules that deal with the treatment of symbology under certain cartographic conditions. Section 500 identifies requirements for geographic names. Section 600 identifies reproduction paper standards. Section 700 will list the area and line patterns used by MK 90 products. Section 800 will cover the printing screens. Section 900 will identify the printing colors with Section 1000 covering the type styles to be used.

The product specifications for the baseline products will be structured around the following format. Section 100 will identify requirements dealing with product accuracy, datums, sheet matching and quality objectives. Section 200 provides discussion on product format with regard to design, projection and grid reference systems. Section 300 covers the features that may appear on the product and identifies their specific attribution requirements for inclusion. Section 400 will discuss margin data content as keyed to the product style sheet, with Section 500 identifying specific reproduction requirements.

Development activities began in May 1983 and are on schedule against identified objectives. The first of which is to develop preliminary drafts of the baseline product specifications and the companion DMA Standard document. These in turn will be used by government contractors to support preliminary and subsequent design reviews scheduled for mid-1987 and beyond.

Since this is the first attempt to standardize product specifications through the use of a common structure, numerous refinements are anticipated over the next year or so. However, it should be fairly obvious at this point as to the ease by which these refinements can be made to any and all products. One fact is known; the path to MK 90 will lead to new and innovative ways for DMA to produce MC&G products. Preliminary comments on Issue 14 efforts provides a favorable basis from which to disembark.

END

12- 86

DTIC