A U T O N E T I C S

A DIVISION OF NORTH AMERICAN AVIATION, INC.
INDUSTRIAL PRODUCTS
3400 E. 70th Street, Long Beach 5, California

14 December 1959

RECOMP II TECHNICAL BULLETIN NO. 3

TITLE: SUBROUTINE DESCRIPTION FORMAT

PURPOSE: To provide a standard format for subroutine
            descriptions.

EFFECTIVE
DATE: 14 December 1959

REVISED: 26 April 1962

CONTENTS: Standardized documentation of a subroutine
            facilitates its use by personnel other than
            the originator. This bulletin outlines the
            format for subroutine descriptions and should
            be used as a guide for contributing subroutines
            to the Program Library. Technical Bulletin
            No. 2 outlines the format for program descriptions.

            All completed subroutines are issued under a
            number assigned by Industrial Products Programming.

            A subroutine description will consist of the
            following parts:

                    Title
                    Purpose
                    Method
                    Restrictions
                    Usage
                    Coding Information
                    Checkout

            See Appendix I or II for a sample First Page.
            The headings on this page are self-explanatory.
            See Appendix III for the numerical format and
            detailed subheadings of the parts of a subroutine
            description detailed below. See Appendix IV for
            layout sheets that facilitate subroutine
            documentation.

The PURPOSE of the subroutine should be stated clearly and precisely.

The METHOD section should include all basic formulae or approximation techniques and the accuracy of such techniques. Derivations of unique solutions should be given. References that might aid the reader's comprehension should be included.

RESTRICTIONS on the method of using the subroutine, the equipment required, relocation limits, and the additional subroutines needed must be stated. The range, scaling, location, and extent of data must be given.

The section on USAGE should contain the operating instructions for the subroutine. These instructions and the calling sequence must be clearly defined. All symbols used should be explained. Initial computer set-up configurations and input instructions must be carefully outlined. Permanent and temporary storage locations should be given. The use of the L or V loops should be indicated. Whether the subroutine is relocatable or non-relocatable should be stated. The effect of errors and how to handle them should be detailed. If there are options as to type of data permissible, or variety of output, an explanation of the procedure should be given.

CODING INFORMATION should include constants used and their locations, unused storage, temporary storage used, timing required for executing a standard or average problem, and the flow chart for the subroutine. For those requiring detailed knowledge, the subroutine listing or coding sheets should be available on request.

The CHECKOUT section should indicate the manner in which the routine was checked out and for which values.

REFERENCES: None

INFORMATION
TO: All Personnel Concerned

REVISED BY: H. M. Guss
Training and Sales Support

Recomp II

PROGRAM NO.

ORIG. DATE

REV. DATE

PROGRAMMER

PAGE   OF

First Page
(Industrial Products)

PROGRAM TITLE:

SUBROUTINE DESCRIPTION FORMAT

A U T O N E T I C S

A DIVISION OF NORTH AMERICAN AVIATION, INC.
INDUSTRIAL PRODUCTS
3400 E. 70th Street, Long Beach 5, California

RECOMP _____ USERS PROGRAM NO. _____

PROGRAM TITLE:

PROGRAM CLASSIFICATION: SUBROUTINE

AUTHOR:

PURPOSE:

DATE:

Published by
RECOMP Users' Library
A Div. of North American Aviation, Inc.
Long Beach, Calif.

SUBROUTINE DESCRIPTION FORMAT

PROGRAM NO:
ORIGIN. DATE:
REVISED DATE:
PROGRAMMER:
PAGE   OF

1.   PURPOSE (briefly)

2.   METHOD

        Techniques
        Accuracy
        Equations or formulae
        Derivations
        References

3.   RESTRICTIONS

        Required equipment
        Additional subroutines needed
        Relocation limits
        Range, scaling, location, and extent of
        arguments.

4.   USAGE

        Computer set-ups
        Sequential operating instructions
        Calling sequence(s)
        Data input: Placement of parameters
        Symbols used
        Storage: Permanent and temporary
        Relocation information
        Utilization of L and V loops
        Error indications
        Re-start procedures
        Options available
        Output format

SUBROUTINE DESCRIPTION FORMAT

5. ## CODING INFORMATION

    Constants and their locations
    Temporary storage used for input, output
    Unused locations
    Timing
    Flow chart

6. ## CHECKOUT

    Method

SUBROUTINE LAYOUT SHEETS

PROGRAM NO:
ORIGINAL DATE:
REVISED DATE:
PROGRAMMER:
CHECKED BY:
PAGE   OF

1.   PURPOSE

2.   METHOD (References; Derivation)

- -

3. RESTRICTIONS (Range, Scaling, Location, Extent of Argument(s);
    Accuracy; Relocation Limits; Timing (if Excessive); Additional
    Subroutines)

4. USAGE (Argument(s); Calling Sequence(s); Symbols; Error
    Indication; Storage; Relocation; Loops; Option; Output)

- -

5.   <u>CODING INFORMATION</u> (Constants; Unused/Erasable Locations; <u>Timing</u>)

6.   <u>CHECKOUT</u> (Method)