

Marconi Myriad Software

The standard programming languages supplied with the Myriad range are Assembly Language (User Code), Fortran, Coral and Algol. The systems are based on paper tape input-output, and incorporate a range of program-test and diagnostic aids, and automated program-amendment.

Assembly Language

Symbolic addresses and mnemonic functions are used, and a specialized program-amendment system provides print-out in a standard format. Two program-assembly systems are available, of which the simpler is intended for small machine-configurations, while the more complex provides for individual 'segments' or 'modules' of program to be compiled independently, prior to loading. This procedure allows program segments to be developed, tested and documented as self-contained units, and opens the way to 'modular' software. Variants allow outputs to derive from paper-tape punch, character-printer, or line-printer according to choice.

System-support includes dictionary and fault data print-out, post-mortem and a very versatile 'trace' procedure.

Fortran

A compiler for A.S.A Basic Fortran is supplied, and the system adopted allows segmentation as used in relation to the Assembly Language. Complete programs may therefore be built up from 'modules' deriving from Assembly Language and from Fortran.

Coral

Coral is a high-level language sponsored by the Royal Radar Establishment and designed to meet the needs of on-line automation applications, where efficiency of translation is particularly important. Experience in the use of the Jovial-based language is leading to refinements; a Myriad-Coral system is available, and later versions will incorporate more advanced features.

Algol

Myriad Algol is an extremely comprehensive implementation of the Algol 60 language, in which only minor deviations have been allowed. Program-recursion is permitted, and most published algorithms can be used with the system. The implementation is designed particularly for rapid and easy program-development; a small sacrifice in speed has allowed excellent run-time diag-

nostics to be incorporated in addition to the normal syntax checks and reports.

Operating Environments

(1) A 'Real-Time Executive' is available which allocates control to one of a range of 'jobs' on a priority basis, and organizes communication with input/output packages. The system includes a number of advanced features, and provides a framework within which Automation programs are written.

(2) An 'Off-line Executive' provides batch-processing facilities in which programs and data are drawn automatically from disc storage, and program-execution is carried out concurrently with input and output of job instructions and of data. This arrangement minimizes the loss of processing-time due to input of data, and leads to greatly increased computing capacity.

Standard Sub-routines

A comprehensive range of sub-routines for single and double length floating-point arithmetic and for trigonometric and hyperbolic functions is provided. Other standard packages include a range designed for peripheral-device control.

Specialist Applications

Projects in Air Traffic Control, Radar Systems, Communications, Computer Graphics, and other fields have led to a number of standard applications packages and to experienced programming support. These packages can be drawn on in building up programs for specific applications, but are not normally issued to users.

Hardware Test and Diagnostic Routines

Fault-detection and location in the Central Processor and in the peripheral equipment associated with it is facilitated by the use of these routines. A substantial library of well-documented procedures is available.

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