

The viewpoint adopted in this paper is that the engineering aspects of computer installations are incidental to the basic management problems involved. The goal is not a computer which can be operated; the goal is a computer which can be operated, maintained and—in terms of definite computational needs—effectively utilized. Effective computer operation implies

that, to the greatest possible extent, makeshift arrangements be circumvented in the planning and preparation stage of the installation. This applies to the layout of the computer system, to storage and office space, trained personnel, tools, test apparatus, auxiliary equipment, spare parts, lighting and air conditioning.

## USE OF CONTINUED FRACTIONS IN HIGH-SPEED COMPUTING

By

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The full text of this paper appears in MTAC VI. No. 39. July 1952, pp. 127-133

### Abstract:

Three numerical methods for evaluating continued fractions are discussed. An Arithmetic example is given for each

method. A comparison is made of the speed of convergence of power series expansions and continued fraction expansions for several functions. Recommendations are made for the most efficient method of evaluating continued fractions for different types of computing machines.

## AN ELECTRONIC ANALOGUE MACHINE FOR COMPUTING EQUATIONS OF DEGREES THROUGH THE ROOTS OF ALGEBRAIC THE EIGHTH

By

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The full text of this paper has been submitted for publication in Proc. IRE.

### Abstract:

A computer for obtaining the roots of

polynomials was described. This roots are displayed on a cathode-ray tube screen, and high accuracy is maintained by having a pilot root which can be moved into co-incidence with each root in turn.

## FERRO ELECTRIC-MATERIALS AS STORAGE ELEMENTS FOR DIGITAL COMPUTERS AND SWITCHING SYSTEMS

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The full text of this paper has been submitted for publication in Trans. AIEE.

### Abstract:

The growing need for improved types of data storage systems in both the digital computer and telephone switching fields has led to the investigation of ferroelectric materials as memory devices. Among the objectives in developing these devices have been low power consumption

while storing or reading out information, memory access times of one microsecond or less, small size per bit of memory, simplified low cost construction and high reliability. This paper presents an explanation of the operation of a basic storage circuit employing a ferroelectric material, requirements for suitable materials, descriptions of several types of circuits employing ferroelectrics, and experimental data obtained with operating circuits.

## INTERPRETATIVE SUB-ROUTINES

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### 1. INTRODUCTION

The subject of this talk is interpretative programming. An interpretative programme

(or routine, i.e. part of a programme) is one formulated in a special code, usually quite different from the normal code of the machine with which it is used.