



digital computer corporation

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This report is a proposal for the formation of a new company, DIGITAL COMPUTER CORPORATION, to manufacture digital computers and related equipment in the Boston area. It contains a summary of plans for the founding of this company and is intended to be the first step in obtaining financial support. The main product will be high speed general purpose computers, in which magnetic cores and transistors will be used extensively. The computer market will be sought in the following order (1) scientific computation (2) military and industrial control and (3) business. A five year schedule shows detailed plans for the first two years including production, and later expansion of the product line. The budget for capital equipment and operating expenses for the first two years totals \$2,000,000. The founders consist of three MIT Lincoln Laboratory staff members presently engaged in the digital computer field. Professional growth opportunities will attract ample engineers from the large number of technical personnel available in the Boston area.

## PRODUCTS

The main product of DIGITAL COMPUTER CORPORATION will be high speed general purpose digital computers. The design features speed, reliability and flexibility. Transistors and magnetic cores will be used extensively. Speeds of more than 100,000 operations per second will be possible. The MEMORY ELEMENT will consist of units of 1024 registers of magnetic core storage. The number of units will depend on the application. The ARITHMETIC ELEMENT will handle twenty binary digits. The basic INPUT ELEMENT will use high speed punched paper tape readers for data and programs. The basic OUTPUT ELEMENT will use an electric typewriter, a paper tape punch, and an oscilloscope. Facilities for connecting special inputs and outputs will be planned. The CONTROL ELEMENT will provide all basic timing and control pulses. A number of special logical features will be available if required. Secondary products will be any of the components described above, ranging from transistor plug-in units to memory units.



## MARKET

There are in existence in the United States over 100 different types of electronic digital computers. The annual dollar value of the market this year is 500 million dollars, and it is expected to double in the next four years. Already over 150 large commercial computers and 450 medium sized computers have been sold and an equal number appear to be on order. This fact alone demonstrates the widespread interest in digital computers. The next significant step in the commercial computer business will be the use of transistors coupled with existing magnetic core memories. However, no company has yet placed on the market a transistor general purpose computer.

The market for which DIGITAL COMPUTER CORPORATION products are aimed initially is scientific computations. The advantages of computers in saving time and money are continually being extended as experience is gained with existing computers. As a result, more

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computers and faster computers are being sought. Large back logs of orders are evidence of this trend. The potential customers include the engineering and research departments of all medium or large sized industrial firms, government laboratories, military research centers, atomic energy installations and universities. The price of the basic computer offered to this group of users would be somewhat less than \$1,000,000.

The second market for which the computers are aimed is military and industrial control. All computer components developed for scientific computations would also be suitable for control functions. In addition, specialized input-output equipment would need to be developed. Interest in this market should be developed within two years after formation of the company.

The third market for which the computers are aimed is business. All computer components developed for

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scientific computations would also be suitable for business applications. In addition a rather extensive line of auxiliary data handling equipment would need to be acquired before entering this field. This could be obtained by a development program or if suitable arrangements were available an agreement could be negotiated with a company presently making this type of auxiliary equipment. Interest in this market should be developed within four years after formation of the company.

The market for computer components would consist of laboratories and manufacturers of test equipment and special purpose computers.



