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DESIGN AND DEVELOPMENT OF A COMMUNICATION CABLE
FAULT LOCATOR FOR THE ELECTRICAL AND ELECTRONICS
LABORATORY OF THE COLLEGE OF ENGINEERING
AND INFORMATION TECHNOLOGY (CEIT) OF
CAVITE STATE UNIVERSITY (CvSU)
MAIN CAMPUS**

Undergraduate Design Project
Submitted to the Faculty of the
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of the requirements for the degree of
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*Design and development of a communication
cable fault locator for the electrical and
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ABSTRACT

ANTONIO, ROLINO JR. F., BAESA, VLADIMIR AARON O. and SIERRA, ELVIN R. Design and Development of Communication Cable Fault Locator for Electrical and Electronics Laboratory of College of Engineering and Information Technology. Undergraduate Design Project. Bachelor of Science in Electronics and Communications Engineering. Cavite State University, Indang Cavite. May 2005. Adviser: Engineer Michael T. Costa.

The Communication Cable Fault Locator was designed and constructed at Poblacion, Bacoar, Cavite. It was presented to the proponents' adviser and the technical critic during the preliminary evaluation conducted at the second floor of the three-storey Engineering Building on the last week of March 2005. The final evaluation of the design was conducted in the same venue on the third week of April 2005.

The design underwent a series of test before it attained its goal to detect faults of the common communication cables.

The design included the Communication Cable Fault Locator main circuit, 8-bit A/D converter and a simple 5V power supply. The Communication Cable Fault Locator main circuit was composed of 10 MHz Crystal oscillator, MC74HC00N, M74HC4024B1 ICs. The 8-bit A/D converter circuit was composed of EF6821P, NM27C16B and HD74CS138 ICs and MC6802 microprocessor. Other electronic components such as transistor, diodes and resistors were used in the construction of the device.

The performance of the system was favourable based on the proponents' main objective. The design project successfully detected different faults in the communication cable under test and it was displayed on the LCD. Based on the results in the final evaluation, it was recommended to use MPU that is capable of storing all the data needed for the program; store all the data of the different types and length of the cable to be

tested; and use the appropriate program that compute the exact location of the fault within the cable under test.

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