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DESIGN AND DEVELOPMENT OF AN AUTOMATED  
"PASALOAD" VENDO MACHINE FOR SMART  
AND TALK-N TEXT SUBSCRIBERS

*DESIGN PROJECT*

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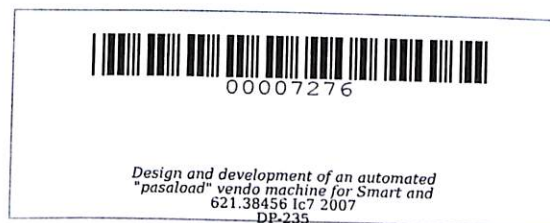
*April 2007*



**DESIGN AND DEVELOPMENT OF AN AUTOMATED  
"PASALOAD" VENDO MACHINE FOR SMART  
AND TALK 'N TEXT SUBSCRIBERS**

Undergraduate Design Project  
Submitted to the Faculty of the  
Cavite State University  
Indang, Cavite

In partial fulfillment  
of the requirements for the degree of  
Bachelor of Science in Electronics and Communications Engineering



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April 2007



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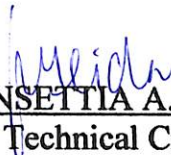
Design Project of : **ALVIN D. ICO**  
**HERSIE JOY S. MENESES**

Title : **DESIGN AND DEVELOPMENT OF AN AUTOMATED**  
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## ABSTRACT

**ICO, ALVIN D., and MENESES HERSIE JOY S.** “Design and Development of an Automated “Pasaload” Vendo Machine for Smart and Talk ‘N Text Subscribers”. Bachelor of Science in Electronics and Communications Engineering, Cavite State University, Indang, Cavite. April 2007. Adviser: Engr. Michael T. Costa.

The design and development of an automated “pasaload” vendo machine was conducted at Brgy II, Indang, Cavite. The main objective of the design project was to design and develop an automated “pasaload” vendo machine capable of accepting 1-peso and 5-peso denominations, and transfer P2, P5, P10 or P15 worth of cell phone load to any Smart and Talk N’ Text subscriber.

The project was composed of microcontroller unit that controls the whole system. The software loaded on it determines the amounts of coin inserted and transfer the corresponding amount of cell phone load. It has a power supply that produced different voltages such as 4.3 V DC needed for the cell phone, 5 V DC to supply the entire machine and 12 V DC for the coin chutes. Its display unit displays the phone number of the subscriber, the remaining load of the cell phone and it also determines whether the system was ON Line or OFF Line.

Testing and evaluation of the machine were conducted at the Information Technology Building of the College of Engineering and Information Technology.

The testing and final evaluation of the machine were done repeatedly to check the machine’s performance, by encouraging students and faculty members to load their cell phone using the vendo machine. A log book was provided to monitor the transactions made. After the evaluation, the designed machine was found to be satisfactory.

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"PASALOAD" VENDO MACHINE FOR SMART  
AND TALK 'N TEXT SUBSCRIBERS<sup>1/</sup>**

**ALVIN D. ICO**

**HERSIE JOY S. MENESES**

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<sup>1/</sup>An undergraduate design project presented to the faculty of the Department of Computer and Electronics Engineering, College of Engineering and Information Technology, Cavite State University, Indang, Cavite in partial fulfillment of the requirements for graduation with the degree of Bachelor of Science in Electronics and Communication Engineering (BSECE) with contribution no. BSECE-2006-07-010. Prepared under the supervision of Engr. Michael T. Costa.

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**INTRODUCTION**

Cellular communication has made a spark in the revolution of wireless industry. People can communicate from and to any point of the globe in just a click through cellular phones. Whatever their status in life may be, you can see people from all walks of life holding their phones and taking time to connect with their friends and families. Cell phone industry has revolutionized with the introduction of prepaid services in 1996. By that time, the lowest denomination for prepaid cards was P250 for Globe Telecoms and P300 for Smart Communications. In 2003, the launching of electronic loading has resulted in a more remarkable growth in the number of cell phone users in the country. Millions of new subscribers were attracted producing a total of 27 million users in June 2004. Through Smart Buddy Load, the possible pre-paid denominations are P30, P60, P115, and P200. In Globe Autoloadmax, the choices are from P25 to P150. To keep the