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# SMART ID-CARD

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*Abstract — Our ID card will act as a smart card with e-wallet loaded on it. As we all know our ID card has a bar code encoded on it this card along with its bar code can act as a mode of carrying out secure transaction. PIN will be provided to student to ensure secure transaction. Further facilities such as changing of pin, blocking of card can be provided for increasing efficiency. This facility is already provided in large organisations and now can be implemented at student's level.*

*Keywords— “ID card”, “E-wallet”, “Transaction processing”, “Security”, “PIN”*

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### Introduction

Nowadays the whole world is undergoing digitalization. We are observing large amount of transaction taking place through cards rather than cash in many public places. Usage of cash is not only inefficient but also insecure mode of payment as cash can be lost or stolen. Our ID cards are already embedded with bar code which is currently used only at library. The bar code consists of wide and narrow bars which represent each character. Barcodes can be read through barcode scanner which uses a photosensor which converts barcode into electrical signals as it scans through the bar code.

Relative width of bars and spaces are measured and scanned through scanner which is then converted into regular characters. These characters are then used to uniquely identify a card to a system. Every bar code starts and ends with a special start and end character. With the help of this bar code the reader can detect whether the card is being scanned forward or backward. Some barcodes also provide error checking by providing checksum character just before stop character.

Student information along with unique barcode will be stored in the system with the help of a database or file structure. In case of file structures various technologies such as length indicator or delimiter can be used.

## Literature Survey

*Exploration and practice on college new digital campus construction-design and application of “campus e-card-through”*

*Authors*

[Jianning Han](#) ; Dept. of Inf. Eng., North Univ. of China, Taiyuan, China ; [Yi Ren](#) ; [Man-xing Bu](#)

*Abstract*

To promote the construction of new digital campus and highlight the role of network information technology in college, the system of “mobile phone e-card-through” has put forward in this paper. The system which is an integration of high-tech achievements with respect to network technology, information technology and communication technology can provide not only the most efficient and convenient information management for different divisions of the college, but centralized and unified information sharing and services for teachers and students as well. Through practices in college, the system has been proved to be an effective way to enhance digitization and informationization management, and realize networking management. Besides, the system which realizes an integration and maximum sharing of college information sources will exert a positive effect on college teaching and researching programs.

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[Artificial Intelligence, Management Science and Electronic Commerce \(AIMSEC\), 2011 2nd International Conference on](#)

*Date of Conference:*

8-10 Aug. 2011

*A robust mobile business card reader using MMCC barcode*

*Authors*

[Siong Khai Ong](#) ; Sch. of Eng., Edith Cowan Univ., Perth, WA, Australia; [Chai, D.](#) ; [Rassau, A.](#)

*Abstract*

Business cards have existed since the 19th century and exchanging of business cards is common during introduction. The digital version, an electronic business card, helps to share information quickly and accurately. Also, it allows information to be stored and easily located. However, the current state of the art in business card readers using OCR technology usually fails in correctly reading all elements of the business card. Hence, in this paper, we proposed the use of a Mobile Multi-Color Composite (MMCC) barcode printed on the business card. Containing the electronic version of the business card, the MMCC barcode allows cheap and accurate reading of the business card with a mobile phone camera. To highlight the effectiveness of the proposed method, we compared the results against commercially available business card readers, both in desktop and mobile versions.

*Published in:*

[Computers & Informatics \(ISCI\), 2011 IEEE Symposium on](#)

*Date of Conference:*

20-23 March 2011.

## Problem

Our present ID card system lacks innovation. Its value can be increased significantly. Present use of ID card is only for identification purpose which is very less compared to the potential it contains. Although our College ID card is used in library for borrowing, renewing and returning

books but we need to increase this functionality as much as possible. It is also observed that many shopkeepers and students face problems of change unavailability, this idea solves this problem efficiently. It also solves insecurities associated with carrying of cash which may not be found once lost. Installing such a system leads to complications but this idea can be easily implemented with existing college ID and minimal efforts.

### **Solution**

Our present college ID card is only used for identification purpose. It consists of our name, USN, printed photo, bar code and other information regarding student. This data can be stored digitally and used for e-payment. Data can be stored using file structures. It will also contain an additional PIN for security purpose. The student will be required to present his or her ID card for making a purchase. He or she is also required to specify PIN. Card can be specified as invalid in case it is lost or a student fails to determine his or her PIN. Once the card is validated the system will check for the amount stored in the card to check if the student has the required currency stored in his or her card. Once the purchase is made specified amount will be deducted from the amount stored in the card. Similar trends can be observed in many places such as malls, offices and other public places. There will be no unnecessary compulsion on students to keep a minimum balance in their cards.

### **Conclusion**

Although our present uses of college I card is good but its use can be further increased and innovated with the help of this idea. Although similar systems are available in other places but they require large amount of resources and tie ups.

### **Future Enhancements**

Security should be increased for secure transaction. Additional data can be stored to observe student behavior in campus. Further discounts can be introduced to increase its usage. Credits can be introduced for enhanced features. Usage can be increased to multiple campuses.