Touch n go

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Touch n Go is a cashless payment method, developed for convenience of customers as you don't have to carry a lot of cash with you. It is like an electronic purse that can be used at all highways, selected parking areas, shopping centres , LRT's , KTM's and Monorail's in Malaysia. The card uses Contactless Smartcard Technology, which is pre-loaded with electronic cash , which can be reloaded at toll plazas, train stations , automated teller machines(ATM's), cash deposit machines , petrol kiosks and at authorised third party outlets, ranging from RM20 to RM500.

Touch n Go acts as a catalyst, enhancing the speed of paying for lower denomination value but having higher frequency transactions. It is highly convenient as there is no longer any need to stand in long lanes for any transactions. Looking into the invention of Touch n Go card, we can look back into its timeline given below: Touch n Go was the mastermind of Teras Teknologi Sdn Bhd and owner by Rangkaian Segar Sdn Bhd. The 1st TnG system was put installed on Jalan Pahang Toll plaza on 18 march 1997 and was immediately extended to Jalan Cheras and East West link Toll plaza on 15th April 1997.

By 15th November 1998, TnG system was fully implemented throughout 848 km north-south expressway of Malaysia, making it one of the world's longest single stretch of expressway electronic toll payment system. The official launch was done at Sungai Dua toll plaza and was officiated by the chairman of Rangkaian Segar Sdn Bhd, Datuk Dr. Ramli Mohammad. The different categories of TnG cards that have been made for the convenience of its customers are: 1. Prepaid Standard Card- A standard card available for adult fares for CTS, Local Railway Modes and Standard class Vehicles having 2 axles with 3 or 4 wheels. . Post-paid Cards: a. Fleet Xs Card- Its main purpose is paying for toll. Details like Company Name, Vehicle registration Number and Vehicle Class are printed on the card having advantages like easy reloading, vehicle flexibility, cashless efficiency etc. b. Biz Xs Card- It is a post paid card for Corporate Users, combined with different offers and packages for the high end business and corporate companies. It has advantages like cashless parking facilities, hassle free reloading, online monitoring efficiency etc. . Auto Reload card: c. Zing Card- TnG Zing is a companion card (has the working as a standard card), but is linked to Visa, MaterCard and American Express Card issued by the participating banks in Malaysia . the moment balance falls below RM 50 , an auto trigger reload of RM 100 is done in the card which will be charged into the credit card plus RM 2 as auto reload fee each time reload is done. Zing Card is currently offered by following banks: 1. May bank 2. Hong Leong Bank 3. Eon Bank 4. Affin Bank 5. MBF bank 6.

AEON Credit Service The 5 components of Information Processing System that can best describe the operations of Touch n Go are discussed as follows:

1. Input: Input is the term denoting " Either an entrance or changes which are inserted into an system, thereby activating/modifying a process. " The Inputs made when processing a request for a touch n go card are: a. Personal Information: All personal details of the TnG card holder required to keep in touch with person are entered in system for future dealings. b. Card Category:

The kind of card chosen by the TnG holder and card ID are inserted into their personal records to keep a record of the places and time the card has been used. c. Credit/Debit Amount: The amount, as per the category of card i. e. Pre paid or Post Paid is credited or debited into the account for it to be used for the various purposes it can be used for. 2. Process: a. Expressway/Highway Toll plazas: A touch n go card works actively as well as passively. An Active touch and go card is used as car users " touch in" before entering the expressways at respective toll plazas and " touch out" at exit toll plaza.

The toll fares are charged on the basis of distance between entry and exit toll plazas. Card users should ensure that the card should have more than RM 2 before " Touch in", otherwise the system will not function. If , for instance card balance is less than amount of toll fare , the exit payment balance after deducted card balance should be paid by cash at " LORONG TUNAI LANES". Some of the highways that use this system are: 1. North-South Expressway(PLUS) 2. North-South Expressway Central Link(ELITE) 3. East coast expressway . Senai Desaru expressway n many more..... A Passive Touch n Go used is in the form of " SMART TAG. " SMART TAG or TAG on board on unit is an extension of Touch n Go which allows its users to insert

the card into a reader device already installed in the car for a fully automatic and hassle free payment at toll plazas. As the Smart Tag gets in the range of the radio frequency of the toll plaza , a process starts where the amount is automatically deducted from the card without even having the need to stop the car.

The toll fare is deducted and the balance amount is automatically displayed on the toll counter, making the whole procedure a smooth process. b. Public Transportation: A Touch n Go card is used as an integrated ticket in the Public Transportation in Kuala Lumpur. As of now, 2 companies have integrated this technology into their system: > RAPID: >> Rapid KL Rail >> Rapid KL Bus > KTM Komuter > KL Monorail c. Parking system: With the passing of time and more and more people now aware of this technology, Touch n Go system has now been installed into many Parking systems.

This in turn reduces the possibility of human error, making the process of money collection more efficient and seamless as while entering and exiting, with the use of TnG card, amount will be deducted automatically as per the number of hours the vehicle has been parked for. Touch n Go Parking Kiosk 3. Output: Output is the term denoting " Either an exit or changes which exit a system, thereby activating or modifying a process. " Regarding the Touch n Go system, the information used to decide the outcome will be relying on the usage of the TnG card.

The information required can be different for different cases: a. Expressway Toll Plazas: Here, the distance between the starting and ending toll plaza decides the amount that has to be deducted from the Card and after

deducting the amount, the balance left in the card is displayed on the small screen at the toll plaza lane. b. Public Transport: For the public transport, the information required for knowing the output i. e. the balance is the distance of the final destination from the source. c.

Parking Lots: The number of hours for which a car is parked at a parking lot helps in deciding the amount that needs to be charged, which can be known as the user " touches in" while entering a parking lot and while " touching out" the duration can be automatically found out and hence deducting that amount from the user's TnG card. 4. Storage : Storage is an important area as it a place where one can cross check any dealings, data or records incase of any issues, mismanagement etc. As far as Touch n Go system is concerned, all the data's and information that are stored are: a.

Personal details of all the TnG card holders. b. Kind of card being used by the card holders. c. Amount of reload being done and the place from where it is being done to keep a check if it is from an authorised place. d. All the transactions i. e. the place where the card is being used, amount used and balance left etc. In case of the card being lost, it can be easier to track back the card with help of these details. All the transactions regarding amount being used, reloading, updating the balance etc. Is done at CCHS i. e. Central Clearing House System.

All the data is kept in the database centre of the company which is not disclosed for the benefit of its users. 5. Communication: A communication system is a way to commute information/data from one place to the other with / without being in contact between the 2 things. In Touch n Go system,

there are 2 ways of Communication: 1. Active Communication 2. Passive Communication Active Communication: In active communication for TnG card, a physical contact is made by the card to the system installed on the toll plazas, where the user's " touch in" and " touch out", Public transport, parking places etc.

The amount is deducted/added as soon as it comes in touch with the system. Passive Communication: It is a mode of communication where there process takes place wirelessly, without the hassle of inserting or displaying any card. In TnG system, this mode of communication is made possible by installing SMART Tags in the cars which when come in the radio frequency of TnG systems , get activated and all the transactions i. e. the process of deducting the amount from the card as per the distance is done automatically , avoiding the hassle of stopping and paying.