**Leveraging GSM Technology in a Fault Proof Access System for Bank Lockers**

Topic: Smart City Projects

Team Name: ABC

Abstract:

Banking is one of the sectors where technology and advancements in technologies have

not been utilized to the fullest potential. Be in security system or access systems or even in

material handling in banks. For example, in the security systems even today very old practices are

followed that can be made lot better using technologies like GSM which is easily usable and also

easy to implement at a consumer level.

In this project we take up one such segment of the banking industry, which is the safety

locker system and propose a fault proof system for enhancing the security in banks. In the

existing system in banks, for the access of a locker all an individual requires is a key, the locker

number and a signature. All of these are relatively easy to either access or duplicate. If any

individual has these then they can easily access the locker because there is no other verification

or authentication involved.

In this project we propose a GSM based secure access system which combines many

details of the individual in a very easy to use system at the customer level. In this project each

locker is provided with a simple and low cost digital system that controls the lock to the locker

instead of a key. This digital system comprises of a small display also mounted on the locker

itself. The digital system is connected to a computer in the bank that in turn has the database of

the customers, with various details of the customers.

The digital system using various personal details of the customer like the date of birth

and their ATM pin and the date of the particular day generates a random number that is unique to

the customer. This random number is display on the display on the locker. When an individual

wants to access the locker they have to see the random number and send this number from their

registered mobile number to a certain bank number as a SMS, along with their ATM pin.

A GSM receiver connected to the bank computer receives this SMS sent from the user

number and verifies all the details like whether or not the information was sent from the registers

mobile number, whether or not the random number is accurate and finally whether or not the

ATM pin was correct. After verifying all these details the computer sends a signal to the digital

system in the locker to open the locker using an electronic lock. If any unauthorized access is

detected the system can raise alarm to alert the bank staff of any attempt of unauthorized access.

Thus this project can enhance the security of the bank lockers to a very high level, using a

complex system that is hard to tamper with and at the same time easy for the users to use. This

also reduces the manual work involved in the whole locker access process.