SIMULATION OF ATM ALARM DATA ANALYSIS SYSTEM

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Abstract— Nowadays, people pursuit of fast and convenient way of life, fast and convenient service of ATM is made for people to avoid waiting in line at the bank for a long time. In order to serve people conveniently, it is need to monitor the ATM equipment to guarantee its normal operation, and deal with the unexpected problems in time. Therefore, this paper builds a platform for alarm service, does some alarm analysis, which appears at different times in different locations of the ATM machine. This can provide better service for ATM users. This system is called ATM Alarm Data Analysis System. The function of ATM alarm service platform is to realize visualization of the different state of alarm center(establish, modify, run, revoke), such as the number of outlet, the online rate of equipment, the number of worksheet processing, the number of answer the intercom, the distribution of equipment and other indicators.

Keywords— ATM data Analysis, Fusion Charts, JSON.

I. INTRODUCTION

Nowadays, people pursuit of fast and convenient way of life, fast and convenient service of ATM is made for people to avoid waiting in line at the bank for a long time. In order to serve people conveniently, it is need to monitor the ATM equipment to guarantee its normal operation, and deal with the unexpected problems in time. Therefore, this paper builds a platform for alarm service, does some alarm analysis, which appears at different times in different locations of the ATM machine. This can provide better service for ATM users. This system is called ATM Alarm Data Analysis System.

The function of ATM alarm service platform is to realize visualization of the different state of alarm center(establish, modify, run, revoke), such as the number of outlet, the online rate of equipment, the number of receive alarm, the number of worksheet processing, the number of answer the intercom, the rate of receive alarm disposal, the rate of completed order, the rate of repeated failure, the distribution of types of fault, the distribution of types of equipment, the distribution of equipment brands and other indicators.

II. EXISTING SYSTEM

Generally the ATM management and Monitoring is done manually in current days. This method consumes more time and it is not efficient one. All the maintenance and revenue related tasks are done manually.

Disadvantages of Existing system

The main disadvantage of the current system is manual administration and manual maintenance. The ATMs are manually checked for depositing of money. If any problem occurs while a transaction is in progress either the customer or the ATM security personal intimates to the ATM management department then the department takes action manually.

The user if he want to know the nearby ATMs he has to approach the third party application or he/she has to check manually which is time taking and cumbersome. There is requirement of a system through which automation of ATM is implemented and it will serve not only for banking department but also to the people who uses the ATM

III. PROPOSED SYSTEM

The proposed system is quite opposite to the current system and more robust and efficient. This system mainly uses API to display ATM indicators information. We are using Fusion Charts for visualizing the various types of charts.

This system completes the interface display of different indicators, such as the number of ATMs, the online rate of equipment, etc. The system interface is given to not only administrator but also user.

IV. IMPLEMENTATION AND RESULTS

We have simulated the ATM alarm using PHP, Google API, Mysql and Fusion Charts.

PHP is used for designing front end. Ajax is used for web pages development. JSON is used for retrieving data from database and converting data to compatible to display the various charts.
Google API is used for getting ATM locations. We used google API which is published by google to retrieve the ATM locations. We embedded the google API key provided by google in our ATM location identification page. Mysql is used for storing ATM data in database. Fusion Charts are used for visualization purpose.

Using this simulation version of the system user can visualize the ATM locations; users can see the cash availability in ATM.

ATM Administration department can visualize the ATM locations, check what are the ATM are working and not working condition, updating of ATMs can be done, number of user of ATM can be seen etc

API Code for Getting ATM locations:

```
<script>
var map;
var infowindow;
function initMap(lat,long)
{
var v1 = parseFloat(lat);
var v2 = parseFloat(long);
var pyrmont = {lat: v1, lng: v2};
map=new google.maps.Map(document.getElementById('map'), {
center: pyrmont,
zoom: 15
});
infowindow = new google.maps.InfoWindow();
function createMarker(place) {
var placeLoc = place.geometry.location;
var marker = new google.maps.Marker({
map: map,
position: place.geometry.location
});
google.maps.event.addListener(marker,'click',
function() {
infowindow.setContent(place.name);
infowindow.open(map, this);
});
</script>
```

In the above script service.nearbySearch function is very important which is used to get the location of the ATM by using location and radius. Location contains two parameters those are longitude and latitude.

![ATM Alarm Data Analysis System](image-url)

Fig. 1 Simulation ATM Cash Information using bar chart
V. CONCLUSION

This paper becomes a pathfinder for other forthcoming projects of ATM related projects. This paper can extended to implement and to maintain ATMs of a region. We can extend the application of the paper not only for ATM maintenance also for hospital data analysis, medical shops data analysis etc.

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