# Application of Automated Project Tracking Information System for Anambra State Government in Nigeria.

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-----------------------------------------------------ABSTRACT:------------------------------------------------------------
Automated Project Tracking Information System provides a simple interface for maintenance of project information and progress in Anambra State, Nigeria. Inabilityto know when projects are awarded, Inability to know when to receive projects, Poor checkmating of project awarded and abnormal documentation of project statistics are problems with Anambra State government in Nigeria. Automated project tracking information system is used by Anambra stateto; build an application that will store, process and activate information about all the projects awarded, design and develop an application package that will be useful for the tracking of project information for the State Government,maintain the records of different projects in the state, that are awarded to companies, the timeline and deadline a project is expected to be completed. The creation and management of accurate, up-to-date information regarding a project progress (the current state of state of the project) is critically important in Anambra. Automated Project Tracking Information System deals with all kind of projects all over the state from development stage to completion stage, keeps awarded projects and information secured as it ensures adequate information security, time saving, easy storage and retrieval mechanism.Structured System Analysis and Design Methodology (SSADM) was adopted. The system was developed using HTML, CSS, JavaScript, and PHP with MySQL database.
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## I.     INTRODUCTION

Automated Project Tracking Information System for Anambra State Government is a system that provides all necessary transactions processing for government or organization.Project tracking system assist in recognizing all tasks that are required to complete a project successfully on time (Schwaibe, 2015). The project tracking system provides a highly standardized, automated technique of budget and planning management across a diverse group of activities.  Davis (2006) opined that the advert of computers made the ideal feasible systems for data collecting, processing, storing retrieving and distribution of information. The computer has added a new and powerful technology to information systems. Hence computer based information system can radically differ from other systems using manual or electromechanical process. Ekwonwune (2007) has shown the need for computers are very necessary in terms of speed, accuracy, reliability, versatility and automatic response. This is the main reason why the glamour of electronic filling of office document in the modern era of government. Computer is by far faster than human being solving the same problem, thus its usage enhances easy execution of tasks in a better and faster way (Vossen, 2017). The computer is always accurate; it could give the same result to a problem at any point in time provided the same program is given (Watmat, 2016). It is glaring that there are challenges of funds and man-power arising from non-continuity of project ranging from one administration to another. This primarily comes or results from the deficiency associated with manual storage and processing of project information in project tracking information in the state, therefore this computer base (automated) project tracking information system of government projects all over the state from development stage to completion stage keeps awarded projects and information secured as it ensures adequate information security, time saving, easy storage and retrieval mechanism (Douglas & Naps, 2015).

The manual ways of sourcing, processing, storing and general handling of information by Anambra State Government is a kind of cumbersome, time consuming and at peak delay. During project tracking, file finding when needed in the office, considering high level of bureaucracy adopted by governments in this part of the world (Subramanian & Satish, 2015) with Anambra State as a reference point. As this ugly development proceeds, during record keeping and other valuable files and information, therefore this usage of computers tracking projects and information was formed as it becomes imperative for improved information storage and

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tracking, stores large amounts of information, reduces so much paper work in various offices, institutions, organizations and ministries under Anambra State Government. It also enables smooth distributions and enlarges information via transferring of files through computer networks. This would go a long way assisting Anambra State Government to take vital decision makings when it is due for it.Anambra state government are faced with many problems when it comes to project tracking; these are; Inability to know when projects are awarded, Inability to know when to receive projects, Poor checkmating of project awarded and Abnormal documentation of project statistics.

Moreover, the aim of this paper is apply automated project tracking system that will achieve the following; to build an application that will store, process and activate information about all the projects awarded, to design and develop an application package that will be useful for the tracking of project information for Anambra State Government, Software that will secure and enhance adequate project security when used and application that keeps tracking of projects and it statistics (Software that watches all projects step by step). The introduction of automated tracking project information system will go a long way in alleviating the problems associated with storage of documents used, quick retrieval of information about the project document and how it was awarded, the nature of the projects, it is duration, amount of money involved and finally it's mode or method of payment. The importance of this paper to Anambra State Government is tremendous, as it will go a long way in making great impacts on our state pride and social tolerance, this will ensure that accurate information is kept and this application will be capable of making our sate transparent in her profit dealings. This therefore goes a long way in encouraging the stability of Anambra State Government during project execution and can also be used by the government to attract more federal government projects considering the high sense of good project tracking system in use.

## II.    ANALYSIS OFTHE EXISTING SYSTEM

Projects in Anambra State governments use a simple manual or paper based project tracking information system, which involves tracking projects by making use of proper manual documentations. This makes the system so tedious and time consuming. Project contractors have to visit all necessary departments of the State Government offices for proper verification and record taking before they can be awarded the project. This process takes some months and years to be completed and possess a lot of stress to both Anambra State Government and the project contractor. In the manual system, the project forms are documented in a file cabinet. Each time the project form is needed, a search operation is conducted on the file cabinets to locate a particular project contractor file. Project contractors, being aware of the manual method can easily dump the project assigned to them, squander the money paid and still put proposal for a new contract. The system is not monitored at all, every contractor behaves the way he or she wants. People that are supposed to supervise the awarded projected are lazy to go through their files to know how far gone with a particular contractor, at times they are involved in this adage that says 'share the national cake' the contractors always give concerned people their cut and nothing happens. This problem may not be noticed by the top officials because there is no tracking system available. The existing system is less expensive to implement, data loss project records documentation is less particularly if the records are stored in a fire proof environment. Existing system has some disadvantages; it consumes time, no media of passing information to various offices and a lot of redundant data.

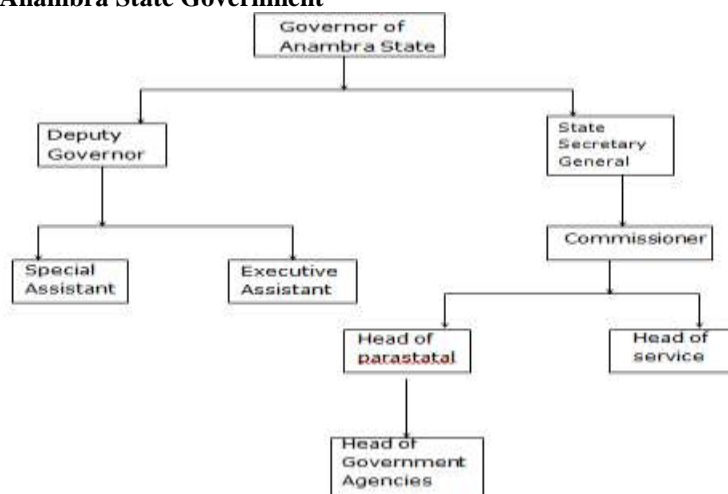### 2.1  Organogram of Anambra State Government



**Figure 2.1** Organogram of Anambra State Government

### 3    Analysis of the New System

The new system solve problems affecting the manual system in use. It is designed to be used online thereby relieving both Anambra State Government and Project contractors from much stress as experienced in the old system/manual system. The new system will analyse and store information automatically and interactively. It will be accessible online when hooked-up to the internet. The system will be able to allow project contractors from any location to obtain feedback concerning the project they have been   awarded or the projects they are working on, rather than going from one office to another without achieving their needs. It will also eliminate the shortcomings of the manual documentation of projects. The new system helps the top government officials awarding projects to know when a particular is completed as at when due, to detect fraudulent contractors who have sworn not to do it right, and from time to time the system will publish list of bad contractors; those that abandoned the projects assigned to them half way, those that embezzled without attempting to work at all on the assigned projects.

The new system offersa lot of advantages in order to improve on the short fall of the present system in terms of functionality, effectiveness, efficiency, timeliness,check-mating of frauds, communicating information to other offices and easy automated information tracking of system.

### 4    Database Specification

In the development of the new system, its data are stored in a database for easy retrieval and update of the data. MYSQL which is embedded inside amp server as a local host. The database consists of tables which offer relational attributes with primary key at various tables. The analysis of the new system table is listed below are; Admin_Registration / Staff Registration,Project Registration,Company Registration,Project tracking and Project tasks

**Table 4.1: Database Structure of Admin_Registration Table**

| S/N | Field | Type | Size | Key |
|---|---|---|---|---|
| 1. | Id | Int | 10 | Primary |
| 2. | Admin name | varchar | 50 | |
| 3. | Admin telephone | varchar | 20 | Unique |
| 4. | Password | varchar | 50 | |
| 5. | Account type | varchar | 10 | |
| 6. | image | Text | | |

**Table 4.2:  Database Structure of Company RegistrationTable**

| S/N | Field | Type | Size | Key |
|---|---|---|---|---|
| 1. | Id | Int | 10 | Primary |
| 2. | Company name | varchar | 50 | |
| 3. | Company address | varchar | 100 | |
| 4. | Company email | varchar | 50 | Unique |
| 5. | Company telephone | varchar | 20 | |
| 6. | Financial strength | int | 20 | |
| 7. | Date of establishment | date | | |
| 8. | Password | varchar | 20 | |
| 9. | Company logo | Text | | |

**Table 4.3: Database Structure of Project RegistrationTable**

| S/N | Field | Type | Size | Key |
|---|---|---|---|---|
| 1. | Id | Int | 10 | Primary |
| 2. | Project code | varchar | 20 | Unique |
| 3. | Project type | varchar | 20 | |
| 4. | Description | varchar | 200 | |
| 5. | Location | varchar | 200 | |

| 6. | Supervisor Number | varchar | 20 | Unique |
|----|-------------------|---------|-----|--------|
| 7. | Amount | int | 10 | |
| 8. | Company Assign | varchar | 50 | |
| 9. | Date Created | Date | | |

**Table 4.4: Database Structure of Project TrackingTable**

| S/N | Field | Type | Size | Key |
|-----|-------|------|------|-----|
| 1. | Id | Int | 10 | Primary |
| 2. | Project name | varchar | 50 | |
| 3. | Project type | varchar | 20 | |
| 4. | company name | varchar | 50 | |
| 5. | company Address | varchar | 80 | |
| 6. | company telephone | varchar | 20 | Unique |
| 7. | Amount | int | 10 | |
| 8. | Starting date | Date | | |
| 9. | Ending date | Date | | |
| 10. | Remark | varchar | 250 | |

**Table 4.5: Database Structure of Project TasksTable**

| S/N | Field | Type | Size | Key |
|-----|-------|------|------|-----|
| 1. | Id | Int | 10 | Primary |
| 2. | Project_id | int | 10 | unique |
| 3. | task | varchar | 20 | |
| 4. | image | varchar | 50 | |
| 5. | added_by | varchar | 20 | |
| 6. | User_type | varchar | 20 | |

## 5 Program Module Specification

The program was designed using Top – Down Approach. It makes use of the fundamental program solving techniques. The software is structured in such a way that each subsystem is selected and executed independently. The task is divided into several modules, which come together to give the solution to the problem. The modules are as follows:
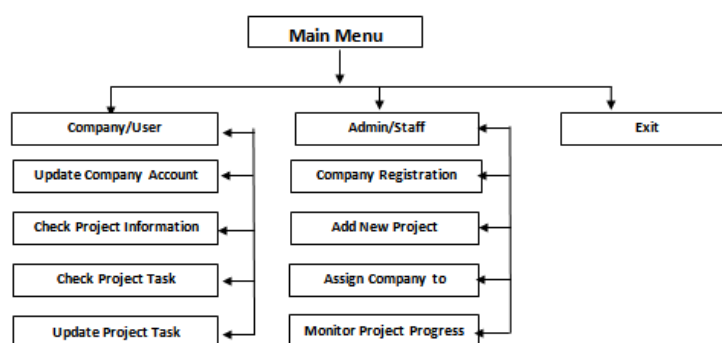


**Figure 5.1 Program Module Specification**

## 7. Input Forms
### 7.1 Admin/Staff Registration Form



**Figure 7.1: Admin/Staff Registration**

### 7.2 Company Registration Form



**Figure 7.2 Company Registration Form**



**Figure7.3: Project Registration Form**

### 7.4 Project task form



**Figure 7.4: Project Task Form**

## 8 Output Specification and Design
The output from the system designed is generated from the system inputs, which are:

| S/N | Name | Email | Telephone | Account | Image | Delete |
|-----|------|-------|-----------|---------|-------|--------|
| 1 | Ajala Femi | staff@yahoo.com | +2348162614369 | staff | | Delete |
| 2 | Oluwafemi | admin@yahoo.com | +2348162614369 | admin | | Delete |

**Figure 8.1**: List of Admins

| S/N | Company Name | Company Address | Company Telephone | Financial Strength | Year Established | Company LOGO | Edit | Delete |
|-----|--------------|-----------------|-------------------|--------------------|-----------------|--------------|------|--------|
| 1 | Julius Berger | off road side, lagos | +2348122334477 | 5billion | 0000-00-00 | | Edit | Delete |
| 2 | Super Builders | Onoshe le firm, Enugu State | +2348455776833 | 000.0000 | 2017-07-24 | | Edit | Delete |
| 3 | Caron Plc | Uk | +2348455776878 | 100m | 0000-00-00 | | Edit | Delete |

**Figure 8.2:** List of Companies

| S/N | Project Code | Project Type | Description | Date Created | Starting Date | Ending Date | Company Assigned | Company Logo | Edit | Delete |
|-----|--------------|--------------|-------------|--------------|---------------|-------------|------------------|--------------|------|--------|
| 1 | 16000199595 | Building | Re-building the structure of t | 2019-08-20 13:37:51 | 2018-01-05 | 2019-12-23 | Julius Berger | | Edit | Delete |
| 2 | 1446516261 | Electricity | Working of the street lights a | 2019-08-20 12:01:27 | 0000-00-00 | 0000-00-00 | Super Builders | | Edit | Delete |
| 3 | 12643630590 | | | 2019-08-20 12:31:14 | 0000-00-00 | 0000-00-00 | Caron Plc | | Edit | Delete |

**Figure 8.3:** List of Projects

| | |
|---|---|
| Company Name | Julius Berger |
| Company Address | off road side, lagos |
| Company Country | Nigeria |
| Company Email | juliusberger@gamil.com |
| Company Telephone | +2348122334477 |
| Financial Strength | 5billion |
| Year of Experience | 1991-05-23 |
| Company Password | julius12345 |

**Figure 8.4:** Registered Company report

| | |
|---|---|
| Project Code | 16000199595 |
| Project Type | Building |
| Description | Re-building the structure of the building that collapse as a result of earth quake |
| Location | Onitcher Road, Anambra |
| govstructrent | Write Obidanci |
| State created | 2019-08-20 13:37:51 |
| Sourcrvice Number | +2348162614369 |
| Amount | 5billion |
| Starting Date | 2018-01-05 |
| Ending Date | 2019-12-23 |
| Current Date | 2019-08-20 |
| Date Status | Project has started since 2018-01-05 and will end at 2019-12-23 |

**Figure 8.5:** Registered project report

## III. CONCLUSION

This paper helps Anambra state Government to maintain, monitor, and evaluate projects given to contractors from time to time. The new system provides a fully automated monitoring and evaluation system of financial requested by simply tracking planned, actual and modified expenditures to information system

accounts. The new system was tested and found to be more efficient than the existing manual system. This automated project tracking system is the best remedy to tackle problem inherent in the existing system. This work has revealed the operations of the Anambra state Government and the need for a database software for keeping the contracts awarded. The software package provides effective and optimal mechanism to keep all the records and to ensure easy retrieval of any record.

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