

A FRAMEWORK FOR UNIFIED VEHICLE CLEARANCE AND REGISTRATION

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ABSTRACT

A framework is an essential supporting structure of a vehicle. A framework for vehicle clearance and registration is a platform designed to integrate systems, build methods, develop procedures and adopt policies which creates a unified supporting structure for vehicle clearance and registration. A vehicle registration is a mandatory certification that every vehicle must have so that it can be driven on public roads whether it is new or used. The old system of registration did not play a significant role on highway safety due to the problems it showed; tension and conflict generated as a result of reassessing already registered/licensed vehicles, Illegal policies and inefficiencies as a result of poor management of authorities and Non-capturing of some geographical areas attended by applicants in the portal. The objectives were to develop an integrated system that will create a robust platform capable of eliminating tension and conflicts generated during vehicle clearance and registration, to develop a system that will enact legal policies that will be adopted by the concerned bodies/agencies responsible for vehicle administration and to develop a system that will capture all areas attended by applicants during vehicle clearance and registration. The methodology adopted for this research is Object Oriented Hypermedia Design Method (OOHDM) suitable for the development of web applications. This method is a mature approach for building hypermedia and Web applications by describing different design models which are then mapped onto a running application. Nigerian government has introduced a new automated vehicle licensing and renewal system known as integrated system for vehicle clearance and registration to tackle the problems encountered in the existing system.

Key words: Framework, Unified Vehicle Clearance Registration

1. INTRODUCTION

Vehicle Registration is the process where we add a vehicle's details to the motor vehicle register and issue its registration plates, a vehicle owner has to renew the registration with the inspector of vehicle offices by law. The process of car registration is completed in less than 15 working days subject to all documents being in proper order. Motor vehicles are licensed regularly at least annually and a current license label is displayed on the vehicle windscreen. The new system was designed to facilitate registration and retrieval of vehicle information in Nigeria. Presently, there were no such information systems. All agencies operated independently and hence produce different dispersed information Balogun (2006). The integrated system will not change the way these agencies operate, rather it will only unify their operations. This means that when registration is being done in one agency, the system will make provisions for registration with other agencies while fulfilling their requirements simultaneously. Retrieval of information will be done simultaneously. With continual research, it was discovered that recent advancement in technologies can be used to improve the existing system (Adeniji 2013). It is necessary to use computer and the internet to process voluminous data within a short period of time or at an incredible speed. It will help to provide efficiency, effectiveness and improve competence over issuance of vehicle license, plate number registration and other related activities that are associated with vehicle ownership. The proposed web application will improve the confidence of Federal Road Safety Commission (FRSC) and Vehicle owners since accurate information will be

produced timely which will enable easy storage and retrieval of vehicle and owner's registration information and online assessment at any time in the future. A highly accurate method of generating and assigning plate numbers will also be featured. This will determine the easiest and fastest way to access vehicle owner's plate number, registration information and missing vehicles through the code generated. Officers on duty will not require original documents anymore. Instead documents can be verified through the unified vehicle clearance and registration portal.

The problems with the present system are; Tension and conflict generated as a result of reassessing already registered/licensed privately owned vehicles that is in use under home consumption, Illegal policies and inefficiencies as a result of poor management of authorities, Non-capturing of some geographical areas attended by applicants in the portal, Unavailability of a robust platform capable of taking the pressure when hundreds of people are applying at the same time.

These problems and many others led to the development of a framework for unified vehicle clearance and registration because the platform is set up for vehicle owners' protection and rights. The Objectives of the study are:- The objectives were to develop an integrated system that will create a robust platform capable of eliminating tension and conflicts generated during vehicle clearance and registration, to develop a system that will enact legal policies that will be adopted by the concerned bodies/agencies responsible for vehicle administration. To develop a system that will capture all areas attended by applicants during vehicle clearance and registration.

The new system will be of great significance in Nigeria because it will incorporate three structured agencies which are the Federal Road Safety Commission (FRSC), State Board of Internal Revenue (SBIR) and Vehicle inspection Office (VIO) in vehicle clearance and registration process. This research focuses on automation of vehicle clearance and registration in South-East Nigeria with the respective agencies involved.

2.LITERATURE REVIEW

Information acts as a backbone and foundation for any economic or development activity and such information must be available and accessible to all and only useful if it is available and if users have access to it in the appropriate form and language (Mundy and Sultan, 2011). The roles which the framework for unified vehicle clearance and registration will play will be more about efficiency, effectiveness and to improve competence (Whitten et al., 2000).

The Comptroller-General of Customs, retired Col. Hameed Ali (2017), on Tuesday announced a code number for efficient and effective vehicle duty clearance verification. Ali disclosed this at a media stakeholders meeting in Abuja. Ali (2017) said that the essence of the meeting was to have a roundtable with stakeholders to come up with solution to avoid causing hardship to Nigerians with regards to duty payment on old vehicles and verification. He said that customs had taken further step to ensure that Nigerians, who wanted to verify the authenticity of their customs duty clearance, could do so at the comfort of their homes with the use of their mobile phones.

"For effective and easy customs duty clearance verification, you can dial or send SMS to these numbers 094621597 with your vehicle C-number, the year you paid the duty and the port or location where the vehicle came through into the country. "Immediately all that information is given, just in five minutes you will get a response whether your vehicle duty clearance is genuine or not," Ali said. He said the essence of the numbers was to ensure stress free verification, to motor dealers and innocent Nigerian vehicle owners.

According to him, for easy traffic flow, the last number which is 7 in the digits 094621597 can be either changed to 8 or 9, to get response faster with different customs personnel on duty at

every point in time. Ali said that Nigerians misunderstood customs intention regarding duty payment on old vehicles, adding that the excise was actually meant for motor dealers. He added that customs later decided to give innocent private vehicle owners, who after verification, might find out that their vehicles had no genuine duty clearance to take advantage of the 60 per cent rebate.

Vehicle clearance and registration are performed online and recording of vehicle information, which ranges from cars to buses and later to truck and heavy duty equipment are addressed. Vehicle registration in Nigeria began some years ago and records have been manually done which in turn has not helped to raise the efficiency of general automotive services in recent years and voluminous load are laid on Federal Road Safety Commission. A framework for unified vehicle clearance and registration software was developed which encompasses the Nigerian Custom Service, the State Board of internal revenue and the Federal Road Safety Commission.

The Federal Government of Nigeria has identified economic development as a major for achieving the 2020 socio-economic development. The unified vehicle registration system is a must for any country that wants to be information and communication technology inclined and ready to reduce the vehicle crime rate and corruption in her system (Whitten et al., 2004).

3.ANALYSIS OF THE PRESENT SYSTEM

These agencies had their independent portals such as Unified Licensing Scheme (ULS), Information Verification Portal (IVP), National Verification Identification Scheme (NVIS), Automated System for Custom Data (ASYCUDA) etc. through which vehicle clearance and registration were done, their database had a lot of shortcomings and inefficiencies which resulted in massive failures of the system because of their inability to update different information relating to vehicle owners and the concerned authorities governing these agencies.

3.1 Federal Road Safety Commission (FRSC)

The Federal Road Safety Commission (FRSC) is responsible for designing and producing vehicle number plates by virtue of Section 5(g) and Section 10 sub section 3(f) of the Federal Road Safety Commission (Establishment) Act, 2007. After production, the number plates are handed over to the State through State Board of Internal Revenue (SBIRs) who now sell to the public. Nigerians have berated the FRSC for its handling of motor vehicle registration across the country, describing it as “cumbersome” and “exploitative.” In July 2009, the FRSC planned to restore the integrity of Unified Licensing Scheme (ULS) and National Vehicle Identification Scheme (NVIS), they also planned to maintain a credible database of all drivers in Nigeria and develop a robust Information and Communication Technology (ICT) network. The Federal Road Safety Commission (FRSC) was one of the earliest federal agencies to embrace ICT. The idea behind Unified Licensing Scheme (ULS) was to unify vehicle and driver licensing in Nigeria in order to create a national database so that authority/personnel would have instant access to vehicle or motorist’s records. Drivers sex, height, blood group, disability, health status etc. similar scheme has long operated in developed and even developing countries with positive implication for road safety management and crime control.

In 2011, The Federal Road Safety Commission (FRSC) in conjunction with the Joint Tax Board (JTB) commenced the issuance of new Number Plates for vehicle clearance and registration in an attempt to harmonize all existing modes of licensing vehicles nationwide. This according to the Corps Marshall and Chief Executive is part of the commission's strategy towards restoring order

and sanity in the nation's Motor Vehicle Administration Scheme. To this end the Federal Road Safety Commission (FRSC) introduced an Enterprise System called National Vehicle

Identification System (NVIS) which is a unified system designed to automate the processes

involved in the Number Plate Production and Vehicle Registration. National Vehicle Identification System (NVIS) is open to members of the public who are Vehicle Owners as well as representatives of States, Federal Ministries, Departments and Agencies. (<http://nvis.frsc.gov.ng/>). The National Vehicle Identification System (NVIS) incorporated only The State Board of Internal Revenue (SBIR), the Vehicle Inspection Officer (VIO) and the Federal Road Safety Commission (FRSC).

Driver's license remains a huge racket for road safety officers, revenue officials and the touts that litter licensing offices. Adeniji, (2013) hitherto, urban transport problems are becoming more and more acute in the cities in Nigeria.

Badejo(2016) summarized Features of Urban Transport System in the Nigerian cities, 95% of urban trips are by road. Out of this, about 70% of the urban trips are made by public transport. Inter modality of trips is limited to public transport journey by road based public transport. Ownership and organization of road public transport systems are characterized by haphazard and uncoordinated operators. Complete absence of comprehensive and integration of urban mass transit public transportation system. According to Torres, (2001) due to poor condition of city roads shortens life span of motor vehicles and high cost of maintenance. Filani, (2002) noted that the country has the lowest level of motorization in West Africa with four vehicles per 1000 inhabitants. To compound the problem further, the rate of vehicle growth is much lower than the population growth rate. Resulting from this mismatch is a general fall in the level of motorization in all parts of the country. Since 1982 and up till 1989/1990 there was a substantial reduction in new vehicle registration in all parts of the country. Olanrenwaju, (2013) classified transportation infrastructure as one of the hard infrastructure that are basic, physical and organizational structures needed for the operation of a society or enterprise, or the services and facilities necessary for an economy to function effectively.

3.2 State Board Internal Revenue

To register a vehicle, an applicant is expected to go to the Motor Licensing Office of the State Board of Internal Revenue (SBIR) where he would be guided on the process and procedure of vehicle registration. The applicant will then be issued with necessary vehicle documents. These are Vehicle License, Certificate of Road Worthiness, Valid Insurance Certificate and Proof of Ownership Certificate. The Federal Road Safety Commission (FRSC) and the State Board of Internal Revenue (SBIR) are not unaware of the activities of unscrupulous elements who are bent on circumventing the due process of vehicle clearance registration for fraudulent and criminal purposes, and that was why processes are being put in place by the Federal Road Safety Commission (FRSC) in collaboration with the State Board of Internal Revenue (SBIR) to checkmate their evil machinations. One of such processes is the development of the online Information Verification Portal (IVP) which affords applicants and vehicle owners the opportunity to verify online the genuineness of their vehicle clearance and registration. This Information Verification Portal (IVP) has a lot of deficiencies because of its failure of populating adequate required owner information which makes the system unattractive to users. However, the Federal Road Safety Commission (FRSC) and the State Board of Internal revenue (SBIR) are yet to develop a reliable standard national database for all registered vehicles in Nigeria.

3.3 Nigeria Custom Services

The importation of vehicles to Nigeria is governed by the Customs and Excise Management Act; Customs and Excise Notices; and guidelines set out by the Federal Ministry of Finance. Under these provisions, importers do not need to be registered, since registration with the Corporate Affairs Commission under the Companies and Allied Decree of 1990 is sufficient to import all but a few regulated vehicles. Vehicle importers must complete an import declaration form: Form M. Other required documents include: an attested invoice; bill of entry (single goods declaration form), copy of the bill of lading/airway bill; a packing list; certificate of insurance; a bank receipt for import duties; a clean report of inspection (CRI) issued by the pre shipment inspection agent; and, if applicable, other documents, such as health certificates, required for the clearance of imports subject to specific standards and technical regulations for health, safety, and sanitary or phytosanitary purposes (section (4)(ii)). Temporary imports and imports of samples and advertising materials are also subject to specific documentary requirements, as are goods for transshipment or in transit. Six copies of Form M must be completed; three copies are sent to the pre shipment inspection (PSI) agents, and one each to the importer's bank, the Nigerian Customs Service (NCS), and the National Maritime Authority (NMA). The designated banks generally approve Form M on the basis of the attested invoice, and mark whether foreign exchange is required or whether the import would be funded externally. Banks can issue letters of credit upon authorization by the Central Bank of Nigeria (CBN). Documentation requirements for the purchase of foreign exchange are considered burdensome. The PSI agent's liaison office issues a clean report of inspection (CRI) to the importer after inspection by the PSI body in the supplier country. The importer submits the Form M processed by the bank, the clean report of inspection (CRI) and other relevant documentation to Nigerian Custom Service (NCS) for processing. Since 1999, Nigerian Custom Service (NCS) has been using Automated System for Customs Data (ASYCUDA, version 2.7) but there are plans to upgrade the system in order to speed up customs clearance.

4. ANALYSIS OF THE PROPOSED SYSTEM

The proposed system is an online integrated system developed to tackle the problems in the existing system and enable vehicle owners register their vehicles with ease. It provides a compliance interface between the Nigerian Custom Service (NCS), the Federal Road Service Commission (FRSC) and the State Board of Internal Revenue (SBIR). The applicant will select registrations desired and web payment page will be displayed. After payment, a payment code with chassis number will be generated. The applicant will use this printout to visit FRSC, VIO, and finally SBIR for collection of Proof of Ownership Certificate (POC), Vehicle Identification Tag (VIT), Vehicle Number Plate and other documents. Additionally, these documents can be renewed online.

The new system will be used to retrieve information about a particular vehicle using only the chassis number of the vehicle. An officer on the road can check from the web application if a vehicle has been cleared by all other agencies: NCS, FRSC, and SBIR.

4.1 Proposed System and Implementation

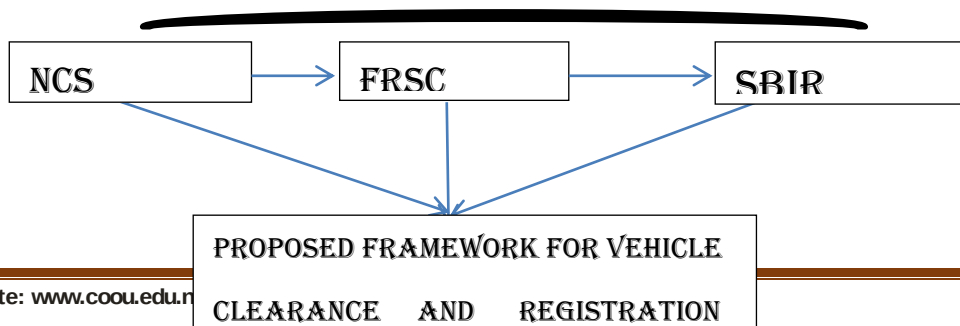


Figure 1: Framework for Unified Vehicle Clearance and Registration

The framework for unified vehicle clearance and registration is an interface which links the agencies responsible for vehicle clearance and registration together so that their respective databases will be unified to create an efficient synergy to aid vehicle clearance and registration and also encourage the authorities that make the policies that govern road use Act and laws protecting the rights of vehicle owners. The proposed system is being implemented in vehicle clearance and registration in south east Nigeria.

5.RESULT AND DISCUSSION

It is recommended that this system be used in vehicle clearance and registration in Nigeria. It is also recommended for officers on duty for checking of authenticity of vehicle documents and registration. The proposed framework can be used by the government and other stake holders in Nigeria to monitor the generation of revenue in the country and for the general public for confirm the services rendered by to them by public officers.

This research will change the way vehicle registration is done in Nigeria. It provides the facility for making vehicle clearance and registration online. The system allows the applicant to select whether the payment is to be made once for all the registrations. The system can accept online payments which will forester faster registrations since the applicant can pay from home. The new system can be used on the road by officers on duty as a replacement for checking of papers. The general public will not be victims of fraud since they have the privilege of verifying vehicle registration made for them by another person.

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