

Project Presentations On The Technological Innovations of The Zambian National Registration Card and Wind Energy To Generate Electricity, Not Wind Mill:

(Paper ID: /1083/2019)

Author: Leonard Kangwa Mwansa

School of Engineering, Information and Communications University.

Lusaka, Zambia.

Leonardkangwamwansa0@gmail.Com

Supervisor: Kaela Kamweneshe

School of Engineering, Informations and Communications University.

Lusaka, Zambia.

The intention of this paper is to come up with the technological innovations on the already existing, Zambian Nation Registration Card, the generations of Electricity by the use of Wind Energy in the wind tunnel, making use of the velocity of the wind to turn the turbine in order to generate electrical energy. The introduction of a multipurpose Sim Card .Where the Zambian national registration card can also be used as a passport Document and an ATM Card for various business transactions and that the Wind in the wind tunnel can be used to turn the Turbine to generate Electricity and lastly that the single Sim Card can be used to access all Net work providers in Zambia, that is MTN, ZAMTEL, VODACON and AIRTEL and those that may come on board to provide the Network services in Zambia.

INTRODUCTION

- Purpose to foster creativity, innovations in combating climate change bringing efficiency in the management of nature, human resource, conserving our world and improving the status core of humanity and accountability for all.

MAIN BODY

- There is a purpose to why nature so diverse and human resources are to be tapped and used efficiently to improve life ,bringing justice and sanity in human society which is

mingled with crime, corruption injustice even at the zenith of its existence ,our world is created by YAHWEH with great and abundant resources which when used efficiently can improve the life of the created ,help appreciate YAHWEH the creator and save human life .Today we are in the technological error ,were almost everything may be proved either by logic reasoning ,scientific verifications and many more .The core of life is meant to my view is to appreciate the creator ,help to enhance human life and support its existence rationally.

- Our existence is mingled with vice even he laws we are meant to obey to some is broken by another law ,which is why crime at times is difficulty to combat ,nature has not been utilised to the full ,hence human beings are still suffering despite the thousands of years from the tree of life and the sacrifice of YAHWEH of His son Yarshua to save us and at the expenses of those with greater resources to support their systems. The way we look at what YAHWEH has created makes us come up with things that are useful and at times even dangerous things to our lives. Since these have been made, there must be a way to manage them, combat crime, reduce costs, utilise nature to the full and support human

beings and prevent environmental destructions for the core purpose of saving our Planet Earth.

- In my project presentations, I have used words that can easily be understood to help me explain these ideas to someone who might have had these ideas, but never came to the point that they can work or could have used this knowledge somewhere but could not have helped use it to support fellow human kind. The sources of knowledge is borrowed from nature and the already existing ones which have been inverted by those gifted, but just an improvement of adjustment to make them work better or in a different way obeying the same laws and rules. I do expect some errors in the systems when developed because they will be run by human beings, unless left to run by themselves, minus manipulations for egocentric motives. I may make a mistake but mistakes are a stepping stone to success, though I do not fully agree that they are a means to learning as some mistakes may not help us, learn at all and are irreversible as well as destructive to human life.
- I have used words like Zambia Electronic National Registration Card in short (ZENRC) Card, SIM cards, and Bank ATM which are already known to most people and have been used over and over for various transactions. Wind has been used by many people for sailing across Oceans, Sky divers use them a lot and in the Wind mill to generate Electricity and many more. It is from this knowledge of sky divers training in the wind tunnel that I have borrowed these ideas of Wind energy to be used to generate electricity.
- In case one may think of models, demonstrations and experiments as well as equations, these are already in use in different forms the author has alluded to, hence a

theoretical explanation will do to explain the information needed.

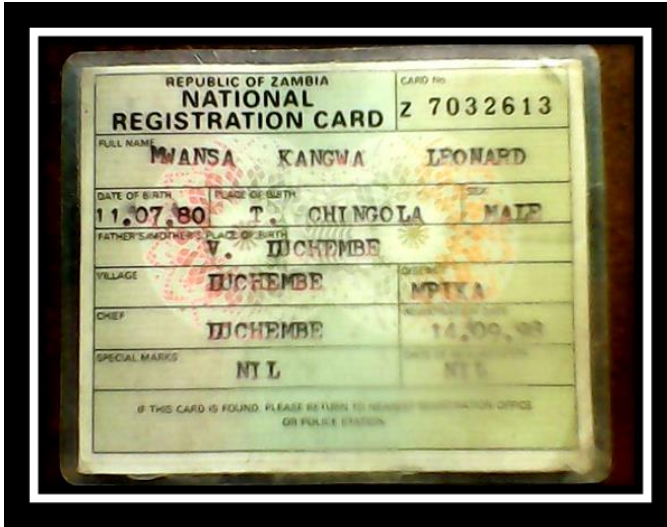
- In this paper presentations, I will discuss the innovations that can be carried on the Zambia National Registration Card, SIM Card, Bank ATM cards and the use of wind energy in the wind tunnel to generate electricity.
- You are welcome and at liberty to discuss these at your level. Information's can be added and subtracted to help these papers carry the message you need but for now it is me to share what I can so that you and me can bring these ideas to human existence in my country and our world.

CURRENT ZAMBIAN NATIONAL REGISTRATION CARD FRONT PART

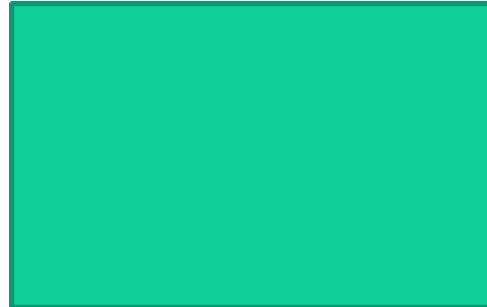


Source: Authors NRC

CURRENT ZAMBIAN NATIONAL REGISTRATION CARD BACK PART



ZAMBIA ELECTRONIC NATIONAL REGISTRATIONS CARD (ZENRC CARD). DRAWING (TEMPLATE) OF ZENRC CARD FRONT PART



This part to be covered with the national flag colour as will be seen.

On the left corner of the card to have the passport size photo of the owner of the card or card bearer. I have chosen this card colour because it is the symbol of our national identity whose features are not available on the current Zambian national registration card we use.

TECHNOLOGICAL INNOVATIONS ON THE CURRENT NATIONAL REGISTRATION CARD

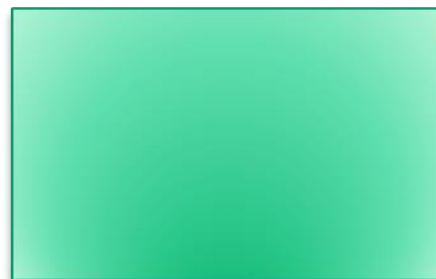
MATERIAL/METHODS/DESIGN

- The main aim of the innovations on the national registration card is to help in combating crime, provides checks and balances, use it as a transmitter and receiver of individuals information, to help in providing individuals information's electronically, use this document as an international passport upon upgrading of personal information's when applied for as such. I have tried to make my explanations as simple as possible to be understood and I have avoided the use of complex terms as these may deter my presentations understanding, I have borrowed this knowledge from the current VISA and Bank ATMS cards, current electronic clinic cards and many more electronic systems in use, I have used the terms Zambia electronic national registration card, in short (ZENRC CARD) I have used these because even a lay man can understand them.
- In the card looking at the current available cards, we use at banks, we can use the same technology to create an electronic national registration card.

BACK PART OF ZENRC CARD

The back part to be covered by the court of arms for our country Zambia, and the center to contain the microchip similar to bank atm cards which will carry all the information's of the bearer .I have chosen this court of arms, as it is also the national symbol of identity, dignity and sovereignty for our country, whose features are visible and available on the current national registration card in use.

DRAWING (TEMPLATE) OF THE ZENRC CARD BACK PART



National flag of Zambia, front part, coat of arms behind, head on the left top and microchip centred at the back. Room should be left for information's upgrade for individual, like for those in higher authority and these can be upgraded once those in authority assumes a new position, room should be left for this ZENRC card, can be used as passport as well as an intelligent carrier and transmitter. This ideas can be applicable to help in combating crime, corruption money rondering fraud, injustices, provide checks and balances, this ideas will be very useful and can incorporate the passport and any needed document that can be added to it easily even a drivers licence the intent is to substitute the paper type of documents with an electronic system type ones. This means that there will be an introduction of a national server were all the details will be stored and can be retrieved electronically once the card is inserted into the machine which will be programmed to activate this information's .This machine can be installed in road blocks ,boarders and at any required offices ,to keep statistical information's and from ZESCO power supply to avoid loss of data and signal failure in case there is no power hence need for wind energy, also at the international air ports to help in the transit of people ,this will easy work of physical check-ups and provide a machine system to verify individual. The introductions of this card is meant for good use and meant to reduce the quantity of documents .For the expatriates and those who are not Zambians by birth a different colour can be adopted .Since we have pink ,we can still use the same pink colour for the documents design but features will remain the same. Not that the current national registration card can be forged easily by non-Zambian, but this one might just be impossible to issue and forge.

ADVANTAGES

It will be easier to access personal details ,can accommodate both pass port ,drivers licence,voters card ,bank atms and many other documents upon upgrade of personal detail .This will help the nation Zambia to raise a lot of money during the process of card replacement

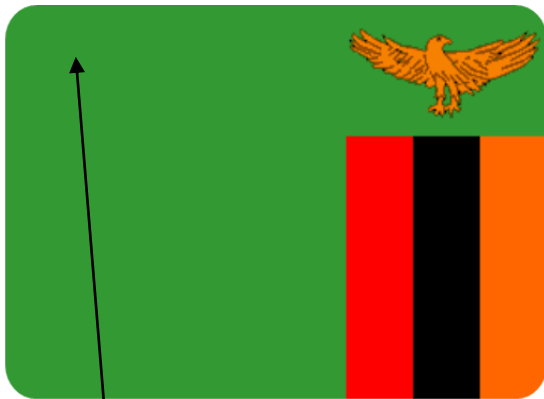
and this can be added to the national budget and this can also benefit the author and the nation at large ,the companies that will be contracted to design or make the card ,meaning employment creations for various sectors.To simply help to calculate if the populations of Zambia is 15 million adults and the the price for this is say K50 .00 for ordinary cards and say 5 million expatriates and foreigners living in Zambia and the ordinary card is K500.00 and the value for up grade to pass port is say k1000.00 .One can ascertain the money this process will raise as easy price upgrade will demand a price fixation based on the card.These prices are my assumptions but the government and stake holders have the authority to fix the actual market price depending on the cost of the material design.Note that I have upgraded the information's here.This means that this project will be very viable ,because it will bring income in the national basket and will be perennially creating employment for all residents and companies that will be involved, for local people and investors as well as the international communities.It can also be used for any business transactions.

The introductions of this card will mean creations of employments ,new companies to develop the software to create these type of card that means creations of employments to both Zambian and non Zambians .Introductions of new systems of checking information's on boarders ,check points ,national airports ,customs offices ,configurations of a new server to access these data security systems to block stealing of these information's .In all this type of creativity it will mean creations of employment on the wide spectrum to many people .These ideas are already in use in the form of ATM cards ,current clinic cards ,Visa and American Green cards ,so we are simply upgrading from the current use of paper type to an electronic system type .Trainings will have to be provided for personnel's to be checking on these type of

systems and maintaining of this type of technology.

THE NEW CARD WILL LOOK LIKE THIS ONE FRONT PART OF ZENRC CARD

This is a template so inserting or pasting is not possible This has been shown for easy understanding.



NAME: LEONARD KANGWA MWANSA
SEX: MALE
AGE :38 YEARS
VILLAGE: LUCHEMBE
NATIONALITY: ZAMBIAN
ZENRC :254744/64/1

The information and the photo to be placed on the position shown by the arrow. Note this is a template so the photo cannot be placed for now

Front part of the Zambia Electronic National Registration card to have the national flag and on the left top to have the head of the bearer.

BACK PART OF THE ZENRC CARD



This chip to be at the centre of the card

For Zambians this image colour can be used and the Microchip to be placed at the centre of the the national court of arms back part of ZENRC card.

ZENRC CARD FOR NON ZAMBIANS FRONT PART TO LOOK LIKE THIS

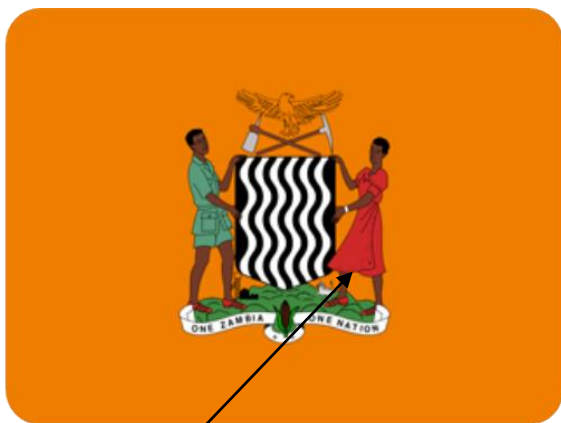
The photo I do not have permissions to use even the name so I can't insert for now, check with mine example alone.



NAME:
SEX:FEMALE
NATIONALITY:BRITISH
ZENRC:776451/64/1

- For non Zambian the front part to look like this the passport size photo to be placed at the top left corner of the ZENRC card.

ZENRC FOR NON ZAMBIANS BACK PART TO LOOK LIKE THIS



This chip to be at the centre of the card

The same format to be at the back of the card, a microchip at the centre. These features can be changed depending on the majority demand, but for me this so far is the best, the decisions is left to those in government authority .

Note at the acceptance of these idea and implementations 50% will be for the government and 50% will be for the author of all the resources that will be generated perennially.

ALTERNATIVE SOURCES OF ENERGY WIND ENERGY NOT WIND MILLS

With the demand for power in Zambia .We Zambians and many others willing can adopt or opt to wind energy to generate electricity but not wind mill as the author is basing his ideas on the wind tunnel. This technology will not dry out and can be applied world wide ,it can be very

profitable and a gold mine to invest in. The ideas Are connected to the use of the water as the means to creat kinetic energy to turn the turbine so that the generator can generate electrical energy ,Instead of using water in the resevior or dams, here we use the force of the wind in the wind tunnel to help turn the turbine to help the generator to generator electical energy. I have avoided the use of equations and complex terms to help many understand this.

ADVANTAGES OF WIND ENERGY

- Ever present.
- Never runs out.
- Prevents water pollutions.
- Has no greater effect on the displacement of populations and natural habitat .
- Can be constructed anywhere even in the desert and tundra regons were there is no water .
- Ther is no fear of over flooding and no effects on people.
- Clean form of energy
- The velocity of the wind can be altered and force can be regurated depending on the capacity needed to be gerated.
- Here we use the force of the wind regurated to move the turbine to generate electricity.
- Not restricted to the locations of a place but can be set at any point in Zambia provided there is enough pumping capacity of the wind to creat enough kinetic energy to turn the turbine ingine to facilitate the power genertaions.
- This knowledge will create employment and revenue to the Zambians and companies that will want to venture into this type of power generations.
- It can creat more forex as te already existing power can be used for local and the rest can be expoted .
- Power distributions can be separated if needed some for domestic and some for

industrial and mining when generated in addition to the already power generated.

- For pumping actions of the wind at start we have ZESCO power to help us ,once this is set the system will be running itself.

DISADVANTGES OF HYDRO ELECTRICITY GENERATIONS

Water dries in the dry season affecting the generation capacity, resulting into load shading and has a greater effect on the national economy.

- Acquatic life is affected due to constructions of dams and this disturbs the hydrological habitat.
- Maitanance cost are high due to the corrosive actions of water .
- Flood gates have to be checked all the time to ensure that they function properly .
- Calculations are not shown for this part ,examples to be drawn from the current effects on Zambia power offsets and its effects on the economy.
- I have borrowed this ideas from the chambers for sky divers in wind tunnels .I have looked at the wind as a good natural resource of energy in this capacity .In this case am avoiding the use of water and am replacing water with wind to be pumped at a regulated velocity to move the turbine to generate electricity ,Transmissions remains the same .In case you may want a model we take the experiment of the biscycle dynamol which uses the machanical advantage to generate power ,also the Kariba dam that already exist to help in the explanations.In this case as stated we substitute water with wind using a wind tunnel .

DISADVANTAGES OF SOLAR ENERGY AS COMPARED TO WIND ENERGY

- The sun does not shine all the time at its streghth and due to changes in seasons globally there are places where solar energy may not be useful but wind in this form is

universalistic even in the dersert and tundra regions provided there is capacity to pump the wind power can be generated.

- Other countries on the Actic and Antactic may not enhance this form of energy due to there locations and climate.

DISADVANTAGES OF TIDAY ENERGY COMPARED TO WIND ENERGY

- Tidal energy relies on waves and oceans current which fractuates and may even create damage to the equipments .The acidic nature of the water and salt water affects the equipments and may need a lot of replacements several times hence not economical.
- This form of energy can only be accessed by people whose locations are close to the Oceans and big seas.

DISADVANTAGES OF BIOSMASS ENERGY COMPARED TO WIND ENERGY

- This form of energy relies on the biomass which atmost may not be availble to everyone in large quantity on the planet and is restricted to those who may want to constantry cause destruction to nature .Because we have to use decaying carbonic matter to have this form of energy created,meaning the over use of the Biomass a natural resource we want to conserve.
- This form of energy may not be utilised on the deserts and regions where matter takes long to decay.

DISADVANTAGES OF WIND MILL ENEGRY COMPARED TO WIND ENERGY

- The wind does not blow at the same velocity all the time on the continets and hence power generations is not enhanced to all regions .

- Regions like the coldest parts of the world may not use this form of energy as the equipments may not function properly .It may not be utilised for commercial industrial developemt as a lot of wind mills will be needed which is not economical and may desplace habitats during constructions.Example is Denimark and Poland which uses this form of energy.

HOW THIS CAN BE CONSTRUCTED

- We use the wind tunnel or tunnels in which we place the turbine engines at various places or points to help generate this power .We substitute water with wind.
- We pump this wind at a reasonale regulated high velocity relative to the power we want to generate.
- Looking at all these and others forms of energy ,it is worth noting that wind energy when used in this form can bring development to may parts of the world.

MULTIPURPOSE SIMCARD FOR ALL NETWORKS

- The simcard will incoperate all the networks and introduce a new top up voucher for all ,meaning that companies have to work together on this .

ADVANTAGES

- It will help to avoid carrying a lot of phones ,it will help introduce a new product of phone design on the market and a new way of billing the recharge .
- It will provide employements to all the people owners of network and related companies,it will reduce the same data storage by Zicta of the same people but on different networks.

MULTIPURPOSE BANK ATM CARDS FOR ALL THE BANKS

The intent here is to upgrade the ZENRC card to be used as bank Visa on ATM machines and various mobile banking.

- This means that the Banks have to agree on the use of the same bank atm card or Visas for various transactions .Its laborious for one to be carring a lot of visas or atm cards compared to the number of banks one is engaged with.Single cards can be efficient to help banks in sincronising informaions ,meaning that the same card here is used for the banks .
- There is no security as most of the cards can be stolen or lost or displaced due to quantity.
- This will also help Zicta to sincronise data for the ZENRC card above or in this caes the same ZENRC card can be used as this bank card upon upgrading.

METHODS USED IN THIS PROJECT PRESESENTATIONS

- Comparisons of forms of energy in relations to the current NRC card ,atm cards and bank visas as well as clinic cards.
- Laptop to help in the research on the editing ,printing and pasting of images and writing in microsoft word .
- Actual analysis of the national registration card NRC for Zambia .
- Mordem and zamtel cards for use on the research of informations on the internet.

RESULTS OF THE PROJECT PRESENTATIONS

- Being innovations on the alread existing sources ,the results can be expected much when the innovations is put into effects and practice.

DISCUSSIONS

- Discussion left to the pannels and the conference confiners to determine the worthness of the ideas.

CONCLUSIONS

- The main ideas of the innovations of the national registration card is to provide security ,checks and balance ,as well as a need to move from the current type of paper type to an electronic systems as most parts of the world has this.Innovations on the current use of wind mills and applications on sim cards and banks visas ,this will help in reducing costs ,bring ecomical way of managing resources and avoid the over use of the water resources and demanging to our world ,issues of climate change and global warming.

ACKNOWLEDGMENT

This goes to my parents ,Mr ,John Kangwa Bwalya ,who helped me to reach this far and My beloved mother Beatrice Besa who sacrificed her time to bring me up to this far May they rest in YAHWEH's hands,lastly my wife and children who encouraged me to work hard dispite the cost when I was not in any formal employment ,my workmate Mwandama who helped me to source for the laptop to help me work on this project at the time I started, the management of the university and the multidiplinary conference who continued adopting my project dispite my inability to make payements on time and to all our beloved Zambian people to whom this will find useful to improve their lives.

REFERENCES

- [1] American Wind Energy Association (2000) "Wind Energy Fact Sheet: Comparative Costs of Wind and Other Fuels" and "Global Wind Energy Market Report." URL: <http://www.awea.org>.
- [2] Duke, R. D., and Kammen, D. M. (1999) "The Economics of Energy Market Transformation Initiatives", the Energy Journal, 20 (4): 15 – 64.
- [3] Hall, D.O. and Scrase, J.I. (1998) "Will Biomass be the Environmentally Friendly Fuel of the Future?", Biomass and Bioenergy, 15 (4/5): 357-367.
- [4] Johansson, T.B., Kelly, H., Reddy, A.K.N., and Williams, R.H. (editors) (1993) Renewable Energy: Sources for Fuels and Electricity, Island Press: Washington, D.C.
- [5] Longer Link Text Code Describing Zambian.com:
`
ZAMBIAN WEBSITE :
* Zambia, Africa at Zambian Website (Zambian.com). Online portal for Zambia. Building an online info map of Zambia. Featuring all things Zambian. </p>`
- [6] Nakicenovic and M. Jefferson (IIASA/WEC) (1995), Global Energy Perspectives to 2050 and beyond, Luxemburg, Austria and London, UK.
- [7] Shorter Link Text Code Describing Zambian.com:
`
ZAMBIAN WEBSITE:
* Zambia, Africa at Zambian.com</p>`
- [8] www.shutterfly.com/card.
Stock.adobecom/buy-picture
- [9] Željko Heimer, (25 Nov 2003, Adopted 24 October 1964, modified 1996, 19 February 1996) Image by Coat of arms .