NATIONAL ENGINEERING COLLEGE

(AN AUTONOMOUS INSTITUTION - AFFILIATED TO ANNA UNIVERSITY,CHENNAI)

K.R.NAGAR, KOVILPATTI-628503.

EEE NEWSLETTER

June 2015

Volume No 3 Issue 1

Department of Electrical and Electronics Engineering

Beloved Readers….

We are pleased to present the first issue (***Academic Year 2015-16)*** of ***Volume 3 of EEE Newsletter*** which will serve as a communication between the EEE engineers. Thank you readers for the kind support which you have been offering so far. It seems to be a powerful weapon for sharpening our pencil to shade.

The student of today is mixed with feelings of self respect, sensitivity responsibility and compassion. Students need to be recognized, appreciated applauded for their sensibilities. Thus the newsletter of Electrical and Electronics engineering department is viewed as a launch pad for the students' creative urge to blossom naturally.

"Sharing knowledge is the first step to humanity". We are all honored to share the words of committed and thoughtful people. What you will find in the pages is a collection of inspired and instructive articles of students, staff members and alumni.

Thanks to those of you who contributed to it as those contributions are essential to the newsletter success.

I appreciate you for taking time to read our newsletter. Please feel free to bring any comments, suggestions or any articles to our attention for future editions.

Best regards and easy reading……..

Manogari. M

Final Year - (Editor- EEE Newsletter)

CONTENTS

STAFF ACTIVITIES/PUBLICATIONS/ACHIEVEMENTS

ACTIVITIES:

S.No.	Name of the Staff	Events/Guest Lecture	Topic	Date	College
1	Dr.L.Kalaivani, Associate Professor	Guest Lecture/ 7 Days FDP on Principles of Digital Signal Processing	FIR Filter Design using MATLAB	28.05.2015	Dept of ECE, National Engineering College, Kovilpatti
2	Mr.N.B.Prakash, Associate Professor	AICTE Sponsored Faculty Development Programme	Advanced Computational Intelligence and Optimization Techniques for Health care Diagnosis System (ACIOTHDS'15)	11.05.2015-24.05.2015	MepcoSchlenk Engineering College, Sivakasi
3	Mr.N.B.Prakash, Associate Professor	Faculty Development Programme	Entrepreneurship, Innovation & Incubation	01.06.2015-13.06.2015	VIT University, Vellore
4	Mr.B.Venkatasamy, Assistant Professor	Two weeks Faculty Development Programme	Topics of Research In Electrical Engineering (TREE'15)	11.05.2015–24.05.2015	Mepco Schlenk Engineering College, Sivakasi
5	Ms.K.Gowthami, Assistant Professor	Two Weeks AICTE Sponsored Summer Winter School Scheme	"ECE-Recent Trends in Embedded Computing System Design"	11.05.2015–24.05.2015	Sri Ramakrishna Engineering College, Coimbatore

6	Mr.P.Samuel Pakianathan Assistant Professor	7 Days Faculty Development Programme	Electromagnetic theory	10.06.2015–16.06.2015	Velalar College of Engineering and Technology, Erode
7	Mr.M.Bakrutheen, Assistant Professor	7 Days Faculty Development Programme	Electromagnetic theory	10.06.2015–16.06.2015	Syed Ammal Engineering College, Ramanathapuram
8	Ms.S.Jayanthi, Assistant Professor	Two weeks Faculty Development Programme	Topics of Research In Electrical Engineering (TREE'15)	11.05.2015–24.05.2015	Mepco Shelenk Engineering College, Sivakasi
9	Mr.M.Gengaraj, Assistant Professor	Two weeks Faculty Development Programme	Power Electronics	04.06.2015-10.06.2015	College of Engineering, Anna University, Chennai
10	Mr.M.SivapalaniRajan, Assistant Professor	Two weeks Faculty Development Programme	Advanced Control System	25.05.2015-31.05.2015	Madras Institute of Technology, Chennai

PUBLICATIONS:

- ✓ S. Senthil Kumar, Dr.M. Willjuice Iruthayarajan, M. Bakrutheen, "Investigations on Suitability of Rice Bran Oil and Corn Oil as Alternative Insulating Liquid for Transformers", *IEEJ Transactions on Electrical and Electronic Engineering (TEEE), John Wiley publishers*. ***Annexure –I (Accepted for Publication) (Impact factor-0.327)***

- ✓ M.P.E.Rajamani, P.Subburaj, Dr.M.Willjuice Iruthayarajan, B.Venkatasamy, "A High Efficiency Non-Inverting Synchronous Buck-Boost Converter for Photovoltaic System", *International Journal of Applied Engineering Research*, Vol. 10 No.5 pp.4945-4950, 2015 ***- Annexure – II.***

- ✓ Dr.R.V.Maheswari, B.Vigneshwaran, Dr.L.Kalaivani, "Genetic Algorithm Based Automated Threshold Estimation in Translation Invariant Wavelet Transform for De-noising PD Signal", *International Journal for Computation and Mathematics in Electrical and Electronic Engineering*, Vol.34, No.4. 2015. ***Annexure – I (Impact factor - 0.440)***

- ✓ N.B.Prakash, M. Parvathavarthini, R. Madavan, "Mathematical Modeling on AC Pollution Flashover Performance of Glass and Composite Insulator", Journal of Electrical Engineering & Technology, Vol. 10 No.4, pp. 1796 – 1803, 2015. ***Annexure – I (Impact factor - 0.517)***

Online Materials – Apart From Book

NPTEL / MIT / EDX

NPTEL National Programme on Technology Enhanced Learning
Fundec by Ministry of HRD Government of India

NPTEL provides E-learning through online Web and Video courses in Engineering, Science and humanities streams. The mission of NPTEL is to enhance the quality of engineering education in the country by providing **free online courseware.**

For control engineering course, another source of video lectures is available in

MITOPENCOURSEWARE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Massachusetts Institute of Technology provides various video lectures on feedback system and their stability analysis demonstrated with real world examples in the link.

edX COURSES SCHOOLS & PARTNERS ABOUT EDX

EDX provides a best online course take form the world's best universities. The sudents can make use of this website as an APP form google App store .

COURSE NAME	WEBSITE LINK
	Second Year
DC Machines & Transformers	**http://nptel.ac.in/courses/108105017/** presented by Dr. D.Kastha, IIT Kharagpur **http://nptel.ac.in/courses/108106071/** presented by Prof. P. Sasidhara Rao, Prof. G. Sridhara Rao & Dr. Krishna Vasudevan, IIT Madras
Electromagnetic Field Theory	**http://nptel.ac.in/courses/108106073/** presented by Prof. Harishankar Ramachandran, IIT Madras **http://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-013-electromagnetics-and-applications-spring-2009/**
	Third Year
Transmission and Distribution	**http://nptel.ac.in/courses/117101056/** presented by Prof. R.K. Shevgaonkar, IIT Bombay
Digital Signal Processing and its Applications	**http://nptel.ac.in/courses/108105055/** presented by Prof. T.K. Basu, IIT Kharagpur **http://nptel.ac.in/courses/117102060/** presented by Prof. S.C. Dutta Roy, IIT Delhi **http://nptel.ac.in/courses/117104070/** Prof. Govind Sharma, IIT Kanpur
Control Systems	**http://textofvideo.nptel.iitm.ac.in/video.php?courseId=108101037** presented by Prof.S.D.Agashe, IIT Bombay **http://textofvideo.nptel.iitm.ac.in/video.php?courseId=108102043** presented by Prof.M.Gopal, IIT Delhi. **http://ocw.mit.edu/resources/res-6-010-electronic-feedback-systems-spring-2013/course-videos/**
High Voltage Engineering	**http://nptel.ac.in/courses/108104048/** presented by Prof. Ravindra Arora, IIT Kharagpur **http://www.ee.iitkgp.ernet.in/faci_hv.php** Virtual High Voltage Lab in IIT Kharagpur
	Final Year
Power System Operation and Control	**http://nptel.ac.in/courses/108101040/** presented by Dr. A.M. Kulkarni, IIT Bombay
Protection and Switchgear	**http://nptel.ac.in/courses/108104052/** presented by Dr. S.N. Singh, IIT Kanpur
Industrial Automation and Control	**http://nptel.ac.in/courses/108105062/** presented by Prof. S. Sen, Prof. S. Mukhopadhyay, IIT Kharagpur

Article by Staff Member

TARGET TRACKING CONTROL SYSTEM

Mr. M. Sivapalanirajan
Assistant Professor
Department of Electrical and Electronics Engineering
National Engineering College

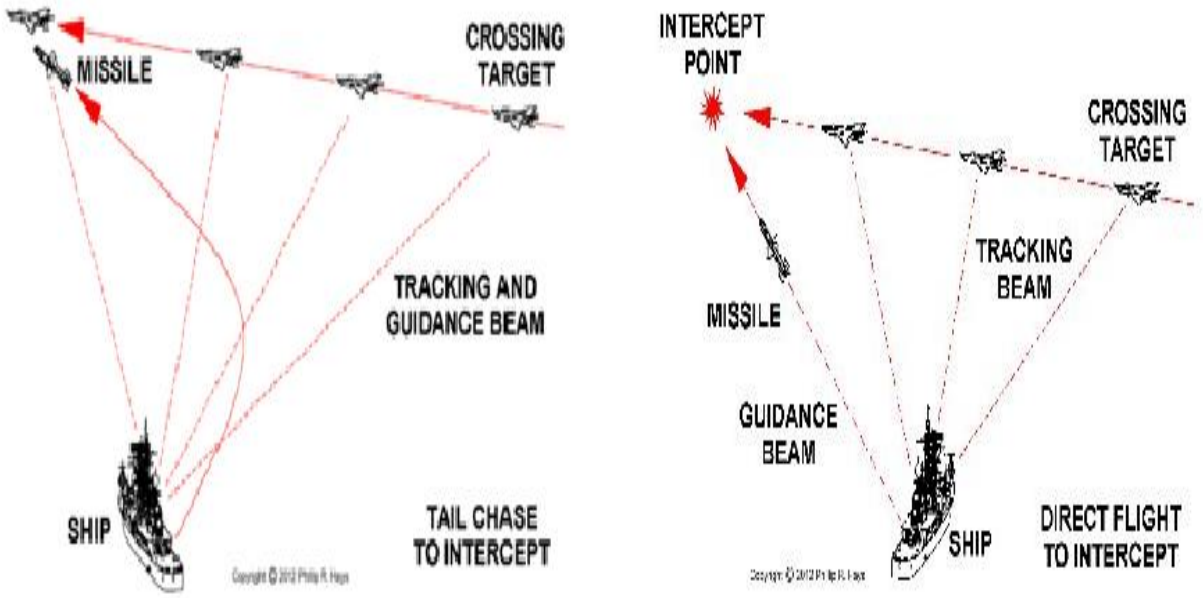
Abstract *Control system plays a vital part for engineering while an engineer or a student met with an idea to implement as real model. In order to make a design to work as per the desired way, the imagined working environment for the developed model has to be meaningful. So it is the prime duty of the engineers to visualize the scenario as good as possible for the successful implementation of engineering concepts to reality. One such imagination oriented to target tracking system is discussed here to share a real time implementation of control engineering. This article describes the flexible engineering deals the war field in a much intelligent way. The missile has to be launched in the right path in order to meet the target through the estimated path on the right time is the mission of this control. This engineering consider various geographic conditions of target based on the distance, speed and type using gyro and spot the target using radar technology. As per the situation various attacking strategies were adopted for the successful engineering.*

INTRODUCTION

The target tracking based on pulsed radar technology was in use at the end of World War II. It was thought initially that the missile could follow the target tracking radar signal. However, the accuracy of a beam riding system depends upon the width of the guiding beam, and the beam width increases with distance from the radar. The effective area of defense is limited to ranges where the width of the beam equals the lethal radius of the warhead. Because of the spread of a radar beam the position of the missile could not be controlled accurately enough to ensure that it would pass close enough to destroy the target at a range beyond ten miles.

The limited space available in the missile and the small antenna size also meant that the missile could not carry a transmitter powerful enough to illuminate the target at long ranges (active homing). The target would have to be illuminated by the ship's radar and the missile would home on the signal reflected from the target (semi-active homing). A guidance scheme was devised consisting of midcourse beam riding to deliver the missile to the vicinity of the target followed by a semi-active homing phase to allow the missile to find and destroy the target

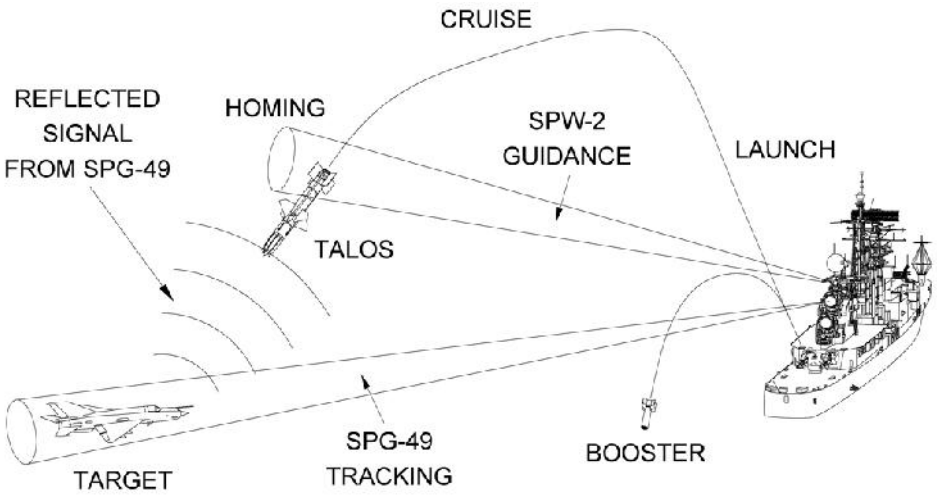
The simplest homing method is to let the target tracking radar beam function as the guidance beam to steer the missile to the target.



This works if the target is flying directly at the ship with little change in bearing. However, if it is a "crossing target" that is flying perpendicular to the line of sight to the ship with a high bearing rate, the intercept problem is more difficult. As the target angle changes the tracking beam must be rotated to keep pointing at the target. This causes the missile to fly a long curved trajectory that always falls behind the target, resulting in a tail chase. In this situation the missile can only close the target at a rate that is the difference between the speeds of the missile and target. If the target is as fast as or faster than the missile there can be no intercept. Even if the missile is faster it may run out of fuel before it catches the target. More advanced versions of the tracking beam guidance scheme used "Proportional Navigation" to aim the missile ahead of the target, but the missile still had to remain in the tracking beam, causing it to fly an inefficient curving path to the target.

To achieve long range intercepts the missile must use fuel efficiently and fly the shortest possible path to the intercept. The ramjet engine operated most efficiently at high altitudes. The most effective use of the missile was to launch it into a high altitude cruise and guide it to an intercept point ahead of the target. This required separate radar beams for target tracking and missile guidance. This scheme had the virtue that the two radars could be optimized to their respective tasks. A fire control computer used target position information from the tracking radar and missile position information from the guidance radar to calculate an intercept point, and then steered the guidance beam to deliver the missile to the target.

The initial Talos guidance system was based upon World War II designs. It was relatively simple by today's standards, and worked only as a result of the development of many new electronic, hydraulic, electromechanical and sensing systems as part of the Bumblebee Program. These new systems were used in many subsequent missiles and airplanes. In October 1952 the prototype Talos interferometer homing system succeeded in homing on a target and destroying it.



Flights were divided into boost, midcourse and homing phases. The missile flew four basic trajectories, depending upon the range to the target and the electronic countermeasures environment.

- For short range targets it flew directly to the target after booster separation.
- For medium range targets (up 100,000 yard range) it flew an up and over arc.
- In a jamming environment it flew low to be under the horizon from distant jammers and then climbed directly at the target.
- For long range targets (greater than 90,000 yards) it climbed to high altitude and then cruised at a constant altitude to the vicinity of the target. There it dove to home on the target.

BOOST PHASE

The booster-missile combination was aerodynamically unstable, so during boost phase the control system actively stabilized the missile to keep it pointed in the same direction that it had at the time of launch. it was necessary to control the wings to provide lift to keep the missile in the beam.

Just before launch an attitude free gyro was uncaged to produce orientation reference signals. If the missile veered off course the gyro produced an error signal that directed the control system to move the wings to reduce the error signal, bringing it back on course. Each pair of wings had an associated rate gyro to control wing motion to prevent over responding which would cause the missile to swing back and forth rapidly. As the missile picked up speed the effectiveness of the wings increased, so the "gain" of the control system was reduced by a factor of 2.6 at 1.75 seconds after launch.

MIDCOURSE PHASE

A speed sensing fuel control system controlled missile velocity after the booster separated and the ramjet ignited. By maintaining a constant velocity the control system did not have to correct system response time for varying velocities. The missile was aerodynamically stable so control was switched from boost attitude stabilization mode to the beam riding mode that controlled steering.

The missile flew inside the radar guidance beam transmitted from launching ship. The beam rider receiver in the missile detected the missile's position in the guidance beam and

produced control signals to turn the wings and steer the missile to the center of the beam. After the missile steered to the center of the wide boost mode beam width was narrowed for guiding the missile. A gravity bias was built into the system to maintain sufficient lift so the missile would not drop below the guidance beam

The control system response time was varied with altitude (air density) to prevent the missile from maneuvering too quickly and overshooting the guidance beam center and to prevent it from oscillating about its center of gravity (weathercock oscillation). The rate of response to wing motion varied with air density so control system sensitivity was programmed to change with altitude to compensate. Altitude was measured by instruments that sensed the static pressure of the atmosphere.

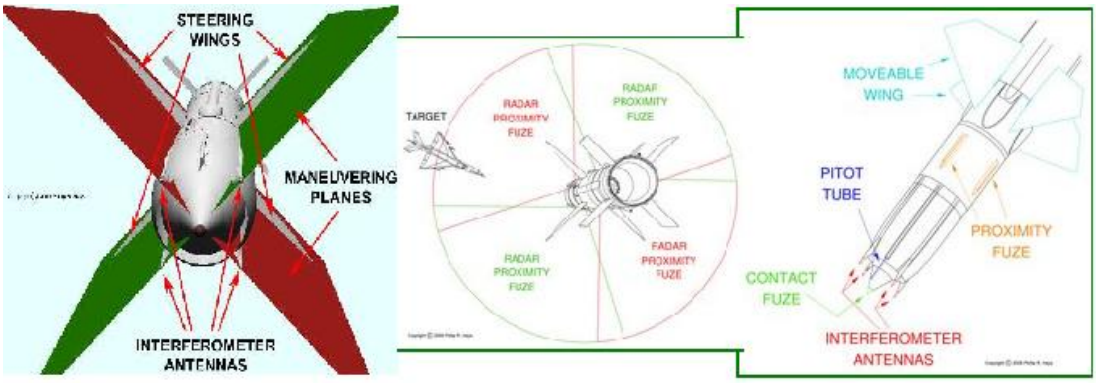
HOMING PHASE

When the missile was in the target vicinity the ship transmitted a signal in the guidance beam to activate the terminal phase of flight. The pressure (altitude) midflight control system was switched off and the terminal guidance system took control. Because the missile would be maneuvering it was necessary to eliminate roll-yaw-pitch coupling. A roll rate gyro provided a signal to minimize the rate of roll.

Target acquisition was achieved about ten seconds before intercept. This allowed sufficient time to adjust for missile heading errors and target maneuvers. The missile was steered on a collision course with the target by maintaining a constant bearing to the target while decreasing the range. The interferometer homing seeker produced rate signals proportional to changes in the line of sight bearing to the target. The control system generated wing movement commands to steer (accelerate) the missile to maintain an unchanging bearing to the target. The control system compared the requested acceleration to the actual acceleration and adjusted system gain to produce an optimum response to maneuvering commands.

Talos was the first missile to use this sensitivity feedback system. This feedback system automatically corrected for changes of speed and altitude. During the homing phase the target was illuminated with a signal transmitted from the tracking radar on the launching ship. The missile homed on the signal reflected from the target. Talos used a scheme to fly the missile to intercept the target. The missile did not aim at the target; it aimed at where the target would be at the time of the intercept, like the intersection of the two roads. This produced the shortest, most direct flight to intercept, with the least maneuvering.

The design of the Talos homing target seeker was complicated by the large ramjet air intake. The seeker had to work without interfering with ramjet performance and it must acquire the target rapidly without needing information from the launching ship telling it the direction to the target. To intercept a target 100 miles from the launching ship the seeker needed good target resolution and high sensitivity.An interferometer homing system was chosen for these reasons. It would use small fixed antennas arranged around the ramjet air intake. These antennas were much less complicated and lighter weight.



The interferometer would have a wide aperture to give accurate measurements of the rate of change of target bearing and it could acquire the target rapidly. The interferometer used two pairs of antennas, each pair positioned in one of the missile maneuvering planes corresponding to a pair of steering wings. Each pair of antennas drove a control system to produce movement in the associated pair of steering wings.

Unless the missile was flying directly at the target the homing signals reflected from the target would arrive at the two antennas in a pair at slightly different times. Consequently, the two signals would be out of phase. The homing receiver shifted the phase of one antenna signal and added it to the other antenna signal. The result was signal that reached maximum amplitude when the two signals were in phase. The amount of time (the phase shift) the signal had to be shifted to achieve maximum signal strength told the system the relative bearing to the target in the plane of the two antennas. The other antenna pair also gave information about the bearing in the second antenna plane.

The homing system watched for changes in the target bearings. If the bearing changed in one plane, the system generated wing control signals for the wings in that plane turn the missile until the target bearing angle no longer changed. It did the same for the other antenna/wing pair. This kept the missile moving on a constant bearing, decreasing range course toward an intercept point ahead of the target

CONCLUSION

As student perspective target tracking is a scenario demonstrated well by plenty of movies in enjoyable form. But it is the job of engineers to make it in real life to save a country from the opponents. This article explains a few traces of the constraints to be taken in account, in order to overcome the challenges enforced in defense. So its our duty to select the right sensing technology to spot the target continuously and make our design fast enough to reach the target on time. So time response and exact prediction of sensed parameter with considered environmental constraints make the engineers to be real hero of the show.

REFERENCE

1. The article by Dr. Phillip R. Hays PhD LT USNR-R on the topic “HISTORY OF TALOS MISSILE GUIDANCE AND HOMING SYSTEM”
2. The article by Dr. Phillip R. Hays PhD LT USNR-R on the topic “USS OKLAHOMA CITY TALOS FIRING OPERATION”.

Article by Students

CDO

We all know Chief Executive officer, commonly called CEO but who is a CDO???

CDO is Chief Digital officer a new post that has been designated by various public and private sector companies around the world. This post emerged due to global digitalization in all fields……So what does a CDO do????

Job of a CDO:

The era of digitalization started in this millennium and its necessity is vast spread into the corners. Initial analog system was converted into digital systems in the advancement of technology. The security of a digital system is the main job of a CDO later on he works for R&D of the present techs. Is this of that much importance??

Importance of Digital Security:

We have digital systems everywhere from a basic computers to top secret military equipment. Generally for a basic computer we provide firewall to protect the files in it which doesn't much require a CDO but a top secret device definitely requires supervision and regular monitoring. Digi security is not merely protecting files but also helping to retrieve them when needed. Common example for it is your username and password that you give whenever you logon to any of accounts like email, Facebook etc.

So this isn't the end of it, it applications extend far more …

Present situation of Digitization in India:

Present Indian Government is keen in spreading digitization in all fields apart from military. We have been writing files in government offices now situation has changed to feed data to a centralized server or separate servers depending upon the data traffic, about a decade ago, birth certificates were got from the municipal offices in person (that too at the place of birth only) whereas today we can get them by post/email by just submitting an online application and the certificate will be issued by a week. Government is extending its arms to all its offices around India to the digitalization, so this drives the growth of the nation.

Global Digitization:

Digitization has reached the common man today by various means like online shopping, cloud storage etc. Digital world creates a new possibilities and acts as the platform to innovations. Research on this field includes robotics, virtual reality, dream designing and many more. Countries around the globe are very keen in keeping their data secure and extraction of data of other countries. Why this article is on EEE newsletter??

It's because we Electronics engineers are the people who are being recruited as the CDO. A lot of jobs are being created and awaiting for everyone so it's your time to qualify yourselves to be a CDO. This article might help you reach your destiny in your dream company or a government enterprise.

By,

K.P.Hariharasudhan.

III Year B Sec

THE SQUARE

Jack Dorsey, the co-inventor of Twitter, is promoting his latest invention called the Square.

The square is a small plug-in attachment to your mobile phone that allows you to receive credit card payments.

The idea originated from Dorsey's friend Jim McKelvey who was unable to sell some glass work to a customer because he couldn't accept a particular card being used. Accepting credit card payments for something you're selling isn't always easy, especially if you are mobile like a tradesman, delivery service or a vendor at a trade show.

This latest invention uses a small scanner that plugs into the audio input jack on a mobile device.

It reads information on a credit card when it is swiped. The information is not stored on the device but it is encrypted and sent over secure channels to banks. It basically makes any mobile phone a cash register for accepting card payments.

As a payer, you receive a receipt via email that can be instantly accessed securely online. You can also use a text message to authorize payment in real time. Retailers can create a payer account for their customers which accelerate the payment process.

For example, a cardholder can assign a photo to their card so their photo will appear on the phone for visual identity confirmation. Mobile devices with touch screens will also allow you to sign for goods.

There are no contracts, monthly fees, or hidden costs to accept card payments using Square and it is expected the plug-in attachment will also be free of charge.

A penny from every transaction will also be given to a cause of your choice. As with Twitter, it's anticipated that Dorsey will direct the company based upon feedback from users. Square Inc. has offices in San Francisco, Saint Louis and New York and is currently beta testing the invention with retailers in the United States.

By

Shanmuganithya. B

III year B Sec

PERSONALITY TO KNOW

ISAMU AKASAKI

The **Honourable Sir Isamu Akasaki** is a Japanese scientist specializing in the field of semiconductor technology and Nobel Prize laureate, best known for inventing the **bright gallium nitride (GaN) p-n junction blue LED** in 1989 and subsequently the **high-brightness GaN blue LED** as well. His invention of efficient blue light-emitting diodes has enabled bright and energy-saving white light sources.

Isamu Akasaki was born in January 30, 1929 at Chiran,Kawanabe district, China. Akasaki graduated from Kyoto University in 1952 and obtained a Dr.Eng. Degree in Electronics from Nagoya University in 1964. He started working on GaN-based blue LEDs in the late 1960s. Step by step, he improved the quality of GaN crystals and device structures at Matsushita Research Institute Tokyo, Inc.(MRIT), where he decided to adopt metal organic vapor phase epitaxy (MOVPE) as the preferred growth method for GaN. In 1981 he started afresh the growth of GaN by MOVPE at Nagoya University, and in 1985 he and his group succeeded in growing high-quality GaN on sapphire substrate by pioneering the low-temperature (LT) buffer layer technology. This high-quality GaN enabled them to discover p-type GaN by doping with magnesium (Mg) and subsequent activation by electron irradiation (1989), to produce the first GaN p-n junction blue/UV LED (1989), and to achieve conductivity control of n-type GaN (1990) and related alloys (1991) by doping with silicon (Si), enabling the use of hetero structures and multiple quantum wells in the design and structure of more efficient p-n junction light emitting structures. They achieved stimulated emission from the GaN firstly at room temperature in 1990, and developed in 1995 the stimulated emission at 388 nm with pulsed current injection from high-quality AlGaN/GaN/GaInN quantum well device. They verified quantum size effect (1991) and quantum confined Stark effect (1997) in nitride system, and in 2000 showed theoretically the orientation dependence of piezoelectric field and the existence of non-/semi-polar GaN crystals, which have triggered today's world-wide efforts to grow those crystals for application to more efficient light emitters. For this and other achievements Isamu Akasaki was awarded the Kyoto Prize in Advanced Technology in 2009 and the IEEE Edison Medal in 2011. He was also awarded the 2014 Nobel prize in Physics, together with HiroshiAmano and Shuji Nakamura,for the invention of efficient blue light-emitting diodes, which has enabled bright and energy-saving white light sources".In 2007 ,He honoured as "order of culture" by Japanese emperor.

"If you really look at it, I was trying to sell a dream … There was very little I could put in concrete to tell these people it was really real."

- BalajiKarkalan. R.,

Third year Sec - A

TIME TO KNOW OUR ALUMNI

RAMACHANDRAN. N, BE(EEE)

Email:*ramachandran.nec@gmail.com*
Contact:+91 9845482281
PASSED OUT : 2005

CURRENT WORKING STATUS:Sr. Design Engineer, Hussmann Services India LLP., Bangalore

PROFILE SUMMARY

- 9+ years of experience in Electrical product design, development & Documentation, Building management systems, Erection and Commissioning of Electromechanical systems.
- Designing of HVAC & Refrigeration Electrical and control systems.
- Experience in Maintaining smooth functioning of the Building Management systems, Coordinate & implement various facilities projects with stake holders
- Project Planning, Execution and Delivery on time every time
- An Enthusiastic personality with sound technical and communication skills.
- Able to manage and motivate people, to complete projects on time with quality.

WORKING EXPERIENCE

1. **Hussmann Services India LLP., Bangalore From Dec 2014 to till date as a Sr. Electrical Engineer.**
    - As a Sr. Design Engineer working closely with the Global engineering at Hussmann Corp Suwanee, GA on Parallel Rack Electrical systems
    - Responsible in execution of Custom order Design (COD) for Parallel Rack Electrical systems
    - Responsible for Design and selection of Kits for each and every order to ensure Quality of the product.
    - Interaction with cross functional team i.e. Application engineering, Sales order entry and Manufacturing teams for production of Parallel Rack Refrigeration systems
    - Verifying and issuing Schematics, Wiring diagrams for Manufacturing with zero defects for Rack Electricals.

2. **Ingersoll Rand International (India) Ltd. Bangalore Duration – 2009 till date as a Senior Design Engineer**

   - As a Sr. Design Engineer working closely with the Global engineering at Hussmann Corp Suwanee, GA on Parallel Rack Electrical systems
   - Responsible in execution of Custom order Design (COD) for Parallel Rack Electrical systems
   - Responsible for Design and selection of Kits for each and every order to ensure Quality of the product.
   - Interaction with cross functional team i.e. Application engineering, Sales order entry and Manufacturing teams for production of Parallel Rack Refrigeration systems
   - Verifying and issuing Schematics, Wiring diagrams for Manufacturing with zero defects for Rack Electricals.

3. **Knight Frank India, deputed to Ingersoll Rand International Ltd. Duration – 2007 to 2009 as a Facility Engineer**

   - Operation& Maintenance of Transformer, DG set, UPS Systems, HVAC systems, BMS Systems etc.,
   - Operation and maintenance of Fire Alarm & Access Control system.
   - Erection, Supervision & Inspection of electrification in the execution side.
   - Operation and maintenance of Sewage Treatment Plant.
   - Planning and Execution of Annual Maintenance Planned Shut down and Getting Annual Maintenance Contract for all M& E Equipments etc.
   - Creating the AMC for subcontractors and coordination/ execution etc.

4. **Prompt Techcom Services Pvt. Ltd., Bangalore Duration – 2007 as Electrical Engineer**

   - Getting orders from Clients for Energy Auditing
   - Create the awareness about Energy Savers (Enviro Start, Enviro Air)
   - Installation & commissioning of APFC.

5. **Sobha Developers Ltd., Chandigarh Duration - 2006 to 2007as Electrical Engineer**

   - Erection, Supervision & Inspection of electrification in the execution side
   - Preparing of Running Bills as per work done & submission of the same to Client

6. **Siemens, Bangalore – on rolls of Ideal Solutions Duration - 2005 to 2006 as BMS Engineer**

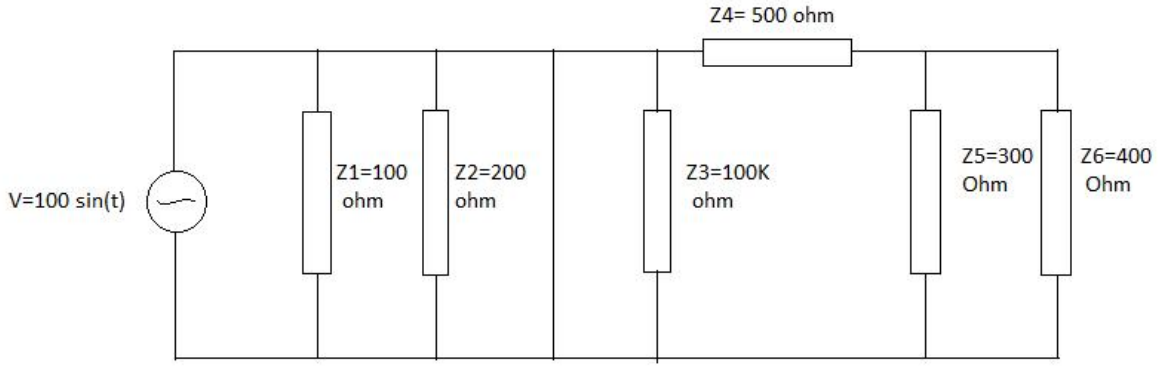
   - Operation and maintenance of Fire Alarm Access, Control system and CCTV System
   - Erection and Commissioning of Fire alarm, Access control Panels.

Hunt the Answer

INTERACTIVE QUESTION

In this academic year (2015 – 2016), we are introducing a new interactive page to bring out the solving skills of the students of our department .From this issue; two questions will take part in this session. The students can mail their answers to the ID below. Attractive prizes are awaited for the first two members!! (Cumulative of all Issues in this Academic Year)

1. **What is the voltage across Z6? From given fig.,**



2. Recently England celebrated 800th anniversary of a famous character agreed by King John.

a. What is the name of the character?

b. What is the significance behind it?

Mail ID: neceeenewsletter@gmail.com

Chance to Attend the Events

PLACE	EVENT	DEPT	DATE	LINK
Sathyabama University	Sustainable technologies in buildings and environment 15	Common to all Branches	15-07-2015	www.icstbe2015.com
VidyaaVikas College of Engineering and Technology	International conference on information engineering, management and security-ICIEMS 2015	Common to all Branches	13-08 -2015 to 14-08 - 2015	http://iciems.in/
Sri Sairam Engineering College, Chennai	Derroche	Common to all Branches	21-08-2015	http://www.derroche2k14.com/
Psg College of Technology	Arduino with matlabsimulink, hands on workshop	Biomedical engineering	22-08-2015	http://www.psgtech.edu/arduinosimulink_final.pdf
G Pulla Reddy Engineering College Kurnool	Conference on power, control, communication and computational technologies for sustainable growth 2015	EEE	12-11-2015	http://pccctsg-conf.org/

Students Achievements

Third Year 'A'

IN-PLANT TRAINING			
S.NO	NAME	VENUE	DATE
1.	K.Maheswari M.Jennifer S.MadhuBala S.Kalaiveni S.Kavitha	India Cements LTD,Tirunelveli	25-05-2015 to 30-05-2015
2.	K.Kiruthika F.Blessintha R.Bavithra G.Essakiammal B.Jerlin	Mahee Pumps LTD,Coimbatore	25-05-2015 to 29-05-2015
3.	E.AbbiramyDeviBala K.Abirami A.AscalPremiSubha J.Aksha	India Cements LTD,Tirunelveli BSNL,Tirunelveli	18-05-2015 to 23-05-2015 25-05-2015 to 29-05-2015
4.	D.Abarna	India Cements LTD,Tirunelveli	18-05-2015 to 23-5-2015
5.	C.Jaya Shree	Electricity Board,Thirumangalam,Madurai	18-05-2015 to 23-05-2015
6.	S.Kirthikha	RamcoCements,Virudhunagar	22-05-2015 to 30-05-2015
7.	A.AmalaAani R.Anusuya	Ramco Cements LTD,Virudhunagar Tuticorin Thermal Power Station,Tuticorin	22-05-2015 to 24-05-2015 25-05-2015 to 29-05-2015
8.	S.Lakshmi	Ramco Cements LTD,Virudhunagar	22-05-2015 to 30-05-2015
9.	J.Manisha Mariel Raj	Tuticorin Thermal Power Station,Tuticorin	18-05-2015 to 23-05-2015
10.	J.Caroline Joy S.Abinaya	Electricity Board Sub Station,Thalaiyuthu Lucas TVS(padi),Chennai	11-05-2015 to 15-05-2015 18-05-2015 to 28-05-2015
11.	P.Essakiammal R.Jesintha P.Kalaiyarasi	Electricity Board Sub Station,Thalaiyuthu	11-05-2015 to 15-05-2015

12.	M.Arun Kumar N.Azarudeen R.BalajiKarikalan M.BalaSubramanium S.DuraiPandian S.GanapathyVinayagam R.HariSankar K.Madasamy@Yuvaraja	Tuticorin Thermal Power Station,Tuticorin	11-05-2015 to 15-05-2015
13.	M.AlaguSelva Kumar P.Anandaraj M.Jegan C.Derick T.JesurajPravin M.Kannan L.R.KausikaLakshmanan R.LakshmanaBalakrishnan N.DeepanRaj	Tuticorin Thermal Power Station,Tuticorin	18-05-2015 to 22-05-2015
14.	S.AfzalAhamed	TamilNadu Water And Drainage	11-05-2015 to 22-05-2015
15.	S.MohammedSuber	Sub Station, Surandai	11-05-2015 to 15-05-2015

Third Year 'B'

IN-PLANT TRAINING			
S.NO	NAME	VENUE	DATE
1.	B.VijayaSankarVignesh K.PeratchiHariharasudhan S.Selva Kumar	BSNL,Tirunelveli	25-05-2015 to 29-05-2015
2.	G.Saravanakumar R.Saravanan T.Titus Paul A.RamaSubramaniam R.M.Vishnu V.Vishnu Kumar M.RajaDurai K.Srinath N.Vignesh V.M.Vignesh M.Vigneshwaran A.Premkumar S.Subash S.Muthuvel P.RathnaPrakash S.Ramesh V.Ramesh G.RajaPandian	Tuticorin Thermal Power Station,Tuticorin	11-05-2015 to 15-05-2015

	N.Naveen Kumar M.NaveenRajkumar R.G.Prejith S.Zainy Mohammed Yousuf S.Venkata Krishnan R.Vignesh M.Velusamy P.Muthupriya M.Muthuselvi N.Nandhini M.Poolammal K.Prema S.Vensiya A.Suvetha S.Renganayaki R.Sumitra S.Sathya K.Sasthika S.Umadevi K.Uma Devi N.SelvaKarthika M.RamyaJemema S.VaishnuPriya T.Viniza S.Vijayalakshmi G.ShivaShankari		
3.	A.Primika B.ShanmugaNithya S.Priyatharsini S.Sheeba Nancy Thangam S.Vigneshwari M.VeniPriya S.Sripriya M.Sudha K.Soundarya N.UshaNandhini	Tuticorin Thermal Power Station,Tuticorin	18-05-2015 to 22-05-2015

Final Year 'A'

IN-PLANT TRAINING			
S.NO	**NAME**	**VENUE**	**DATE**
1.	S.P. Atul Krishna, G.Aneruth Mani	TNEB, Nagercoil	08.06.2015 to12.06.2015
2.	T.Aravind Mari	Gas Turbine Power Plant, Ramnad	
3.	K.Iyappan	TNEB, Ananthapuram	18.05.2015 to22.05.2015
4.	S.Divyalakshmi, S.Hema	Koodankulam Nuclear Power Plant, Tirunelveli	18.05.2015 to20.05.2015
IN-PLANT TRAINING WITH MINI PROJECT			
S.NO	**NAME**	**VENUE**	**DATE**
1.	A.Arun	NSIC, Technical Services Centre, Chennai	08.06.2015 to12.06.2015
INTERNSHIP			
S.NO	**NAME**	**VENUE**	**DATE**
1.	M.Manogari, S.Marithai, S.Divyalakshmi, S.Hema	UNIQ Technologies, Coimbatore	01.06.2015 to05.06.2015
2.	P.Esaivani, S.Muthumeena	UNIQ Technologies, Chennai	08.06.2015 to12.06.2015

Final Year 'B'

INTERNSHIP			
S.NO	**NAME**	**VENUE**	**DATE**
1.	M.Sathya R.Sunitha	National Engineering College,Kovilpatti.	26-5-2015 to11-06-2015
2.	M.IndhuMathy A.RashmiSilvania R.C.Sangeetha S.PriyaDarshini	Uniq Technologies, Coimbatore	1-06-2015 to 05-6-2015
IN-PLANT TRAINING			
S.NO	**NAME**	**VENUE**	**DATE**
1.	R.Usharani M.SnehaPremaLochini G.Sivaranjani	Nuclear Power Station,Koodankulam	18-05-2015 to20-05-2015
2.	P.Suresh Kumar M.Sathianarayanan	Valathur Gas Turbine Power Station, Ramanathapuram	8-06-2015 to 12-06 2015
3.	R.UmaMaheswaran G.BesilBalChandru M.Subbiah K.Narayanan K.Suriya Kumar M.Velraj	Tuticorin Thermal Power Station,Tuticorin	8-06-2015 to 12-06 2015
4.	S.Santhosh Kumar	TRL Krosaki Private Ltd,Odisha	18-05-2015 to 02-06-2015

SPECIAL COURSE				
S.NO	**NAME**	**COURSE**	**VENUE**	**DATE**
1.	R.Sneha	Computer Hardware and Software	Zion solutions, Nagercoil	2-06-2015 to 17-06-2015

IN-PLANT TRAINING WITH MINIPROJECT			
S.NO	**NAME**	**VENUE**	**DATE**
1.	S.M.K.Udhaya Vijay P.Shanmugam	National Small Industries Corporation, Technical Services Centre ,Chennai	08-06-2015 to13-06-2015

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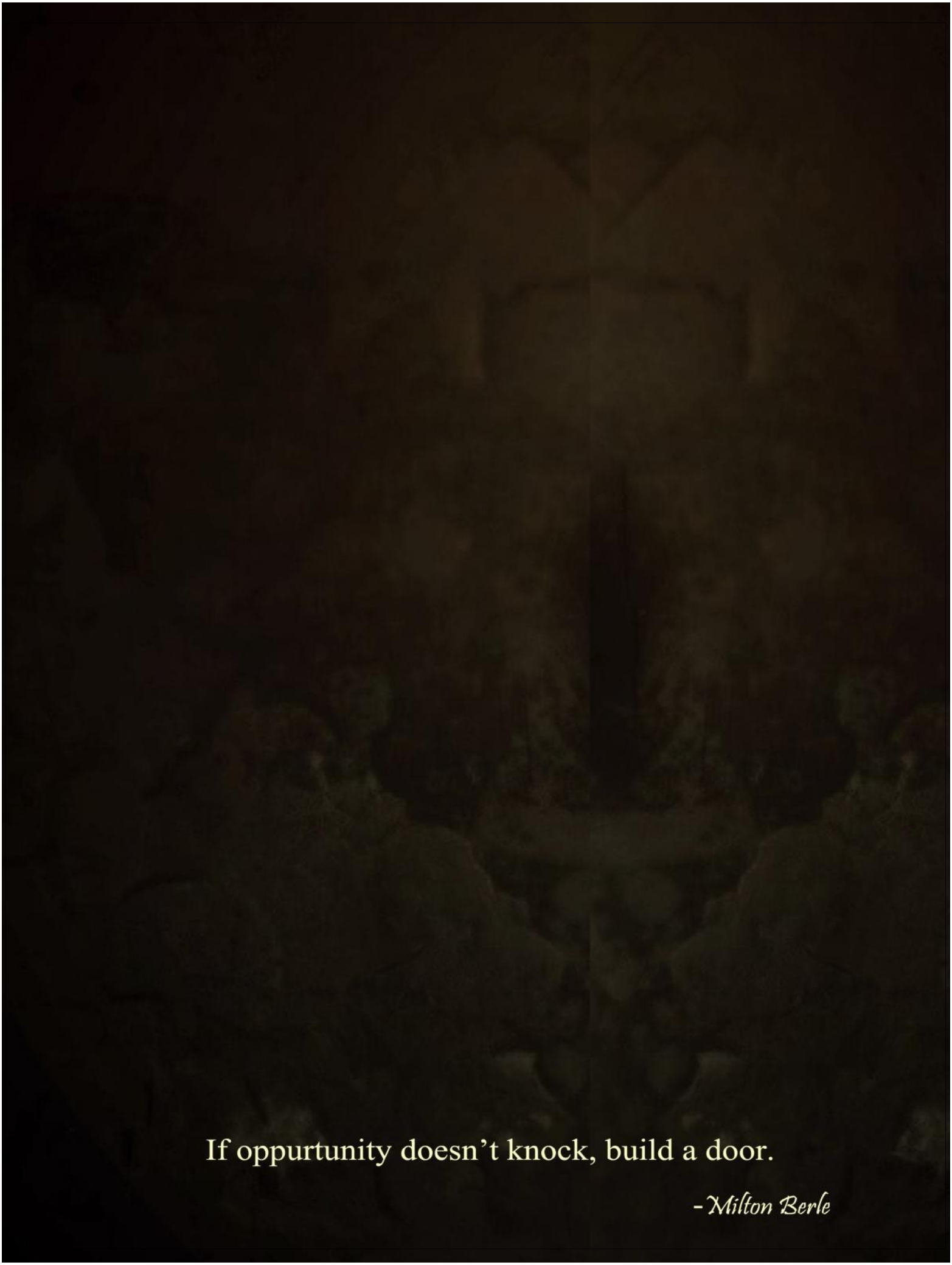
If oppurtunity doesn't knock, build a door.
-Milton Berle