VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN
(Approved by AICTE, Affiliated to JNTU, Hyderabad)
KONDAPUR VILLAGE, GHATKESAR MANDAL, RANGA REDDY DISTRICT - 501 301.

NEWS LETTER

TECHINNOVATION

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Volume - 3

"At its heart, engineering is about using science to find creative, practical solutions. It is a noble profession." – Queen Elizabeth

EDITORIAL DESK

Hello!!! We are happy to welcome you all aboard the fledgling 3rd edition for the scintillating year 2016. TECHINNOVATION is the newsletter of the ELECTRONICS & COMMUNICATION ENGINEERING which aims to bring forward the buzz from the department in the past few months. The edition demystifies the realms of Electronics & Communication Engineering and also provides insight to the latest technology adopted in the field. Hope our deeds would ignite everyone's life!!!

HOD'S DESK

It is a theme of happiness to articulate with all of you Through this 3rd newsletter. Within these pages you will Find much news related to Diverse activities from the Whole faculty and students Of ECE department. I am cheerful for the initiatives taken by the faculty to disseminate knowledge by organizing various activities in the department. I hope everyone will find this news letter Exciting and interesting.

ECE DEPARTMENT

Department of Electronics and Communication Engineering was started since the inception of VIGNAN'S Institute of Management and Technology for Women during 2008 with an initial-intake of 60. The strength was enhanced to 120 during 2005. The Department had added Post graduate program in VLSI during the year 2012 and Embedded Systems during 2014 with an intake of 18 each. The Department is headed by well qualified

VISION

To transform the students into technologically competent professionals, with abilities to address the societal challenges of the time through innovative technical practices in electronics & ommunication engineering

MISSION

M1: To foster inquisitive-driven advanced knowledge building among students for reinforcing the domain knowledge, develop capabilities, skills and solve complex engineering problems

M2: To prepare industry-ready graduates for global Electronics as well as communication based engineering companies by conducting training programs, workshops and industry visits.

M3: To build leadership qualities, research aptitude among students for the contribution of economic and technological development in cutting edge technologies in national and as well as in the global arena.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO1: To develop the student's ability on technical concepts to design, simulate, and synthesize various electronic and communication circuits & systems for their research advancements.

PEO2: To impart analytical skills and to prepare the students excel in applying state of the art hardware and software tools to solve complex engineering problems for R&D, Industry and societal requirements.

PEO3: To prepare students to work in teams, take independent decisions and integrate engineering issues for successful career in multi-disciplinary environment.

PEO4: To promote entrepreneurship among the students to become successful entrepreneurs with professional ethics.

PROGRAM SPECIFIC OUTCOMES (PSOS):

PSO1:1. Professional Skills Ability: Identify, design electronics & communication circuits and conduct experiments with electronics & communication systems, analyze and interpret data, formulate and solve electronics & communication engineering problems.

PSO2: Industrial Skills - Ability: Design digital and analog systems, algorithms, firm ware, modern engineering tools, software, etc. as per needs and specifications and work in laboratory and multidisciplinary tasks.

PSO3: Ethical and Social Responsibility: Communicate effectively in both verbal and written form, will have knowledge of professional and ethical responsibilities and will show the understanding of impact of engineering solutions on the society and also will be aware of contemporary issues

FACULTY TECHNICAL ARTICLE BY

The Article Name:
" Atm Security Using Eye And Facial Recognition System "
Written By B. Madhavi

STUDENT TECHNICAL ARTICLE BY

The Article Name:
"Flexible Electronic Skin"
Written By A. Priyanka

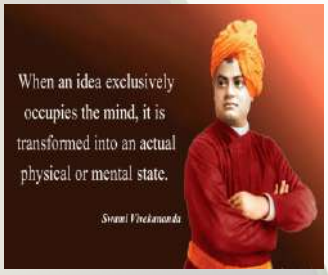
THE BEST PROJECTS

PROJECT TITLES

- BOOM BARRIER GATE CONTROL USING BIOMETRIC
- PRODUCT SORTING M/C BASED ON COLOR RECOGNIZATION TECHNIQUE

CULTURAL ACTIVITIES

- WOMEN'S DAY
- YOGA DAY
- HOLI CELEBRATIONS

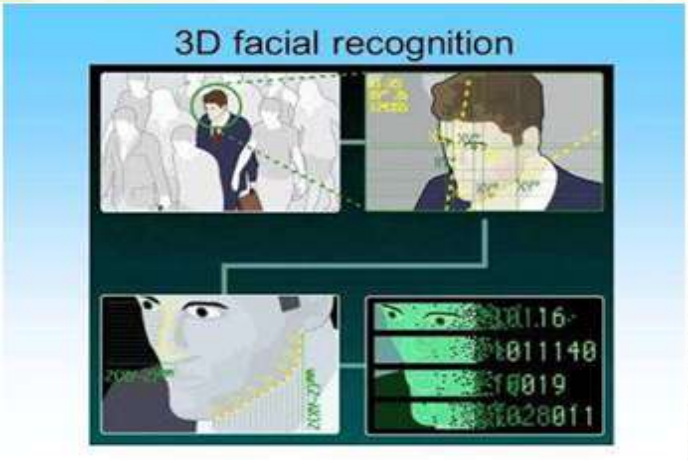


Faculty Technical Article : Title - "ATM SECURITY USING EYE AND FACIAL RECOGNITION SYSTEM" Written by B. MADHAVI

Introduction

The rise of technology into India has brought into force many type of equipment that aim at more customer satisfaction.ATM is one such machine which made money transaction easy for customers to the bank. But it has both advantages and disadvantages. Current ATMs make use of naught more than an access card and PIN for uniqueness confirmation. [1]This has ATM Using Face Recognition System demonstrate the way to a lot of fake attemp and mistreatment through card theft, PIN theft, stealing and hacking of customers account details and other parts of security. This process would effectively become details and other part of security. This process would effectively become an exercise in pattern matching, which would not require a great deal of time

Methodology



The first and foremost important step of this system will be to locate a powerful open source facial recognition program that uses local feature analysis and that is targeted at facial verification. Various facial recognition algorithms be familiar with faces by extracting features, from a snap of the subject's face. For ex, an algorithm may examine the size, relative position, in addition to/or outline of the nose, eyes, cheekbone and jaw. These facial appearances are then used to search for other imagery across matching features. Other algorithm manages a balcony of face images and then compresses the images face information and it saves only the data in the image that is used for face detection.

2-D-Technique

The 2-D recognition method was individual of the original techniques employed. It maintained details of people s faces as seen two dimensionally. [3] Details like width of the nose, width of the eyes, distance between the eyes, jaw line, cheek bone figure were used for contrast. This type of face recognition was not too precise. Change in facial expression or difference in ambient lighting on an appearance that is not directly looking into the camera did not produce expected results.

3-D-Technique

Progression in face recognition gave origin to the 3-D recognition system. This stepped up technique, used facial appearance like contours of the eye sockets, chin, nose, peaks and valley on the visage for identification. The database will store details of faces also. The advantage of 3- D technique over 2-D method is that 3-D face identification works fine even if the face is turned at 90 degree to the camera. It is self-governing of lighting environment and facial expressions. In spite of all these security features; a new technology has been developed. Bank United of Texas became the first in the United States to offer iris recognition technology at automatic teller machines, providing the customers a card less, password-free way to get their money out of an ATM. [4] there s no card to show, there's no fingers to ink, no customer inconvenience or discomfort. It's just a photograph of a Bank United customer's eyes. Iris recognition is an automated method of biometric identification that uses mathematical pattern-recognition techniques on video images of one or both the issues of an individual s eyes whose complex patterns are unique, stable, and can be seen from some distance. A key advantage of Iris recognition besides its speed of matching and its extreme resistance to false matches, is the stability of the Iris as an internal and protected, yet externally visible organ of an eye. Figure below shows an schematic diagram of Iris recognition. Just step up to the camera while your eye is scanned. The iris -- the colored part of the eye the camera will be checking -- is unique to every person, more so than fingerprints. [4] And, for the customers who can't remember their personal identification number or password and scratch it on the back of their cards or somewhere that a potential thief can find, no more fear of having an account cleaned out if the card is lost or stolen.

Conclusion

We thus develop an ATM model which provides security by using Facial verification software Adding up facial recognition systems to the identity confirmation process used in ATMs can reduce forced transactions to a great extent. Using a 2d and 3d technology for identification is strong and it is further fortified when another is used at auntheticiation level.

Student Technical Article : Title - "FLEXIBLE ELECTRONIC SKIN"

Written by A.PRIYANKA

Introduction

Electronics plays a very important role in developing simple devices used for any purpose. In every field electronic equipments are required. The best achievement as well as future example of integrated electronics in medical field is Artificial Skin. It is ultrathin electronics device attaches to the skin like a sick on tattoo which can measure electrical activity of heart, brain waves & other vital signals. Evolution in robotics is demanding increased perception of the environment. Human skin provides sensory perception of temperature, touch/pressure, and air flow. Goal is to develop sensors on flexible substrates that are compliant to curved surfaces. Researcher's objective is for making an artificial skin is to make a revolutionary change in robotics, in medical field, in flexible electronics. Skin is large organ in human body so artificial skin replaces it according to our need. Main objective of artificial skin is to sense heat, pressure, touch, airflow and whatever which human skin sense. It is replacement for prosthetic limbs and robotic arms.

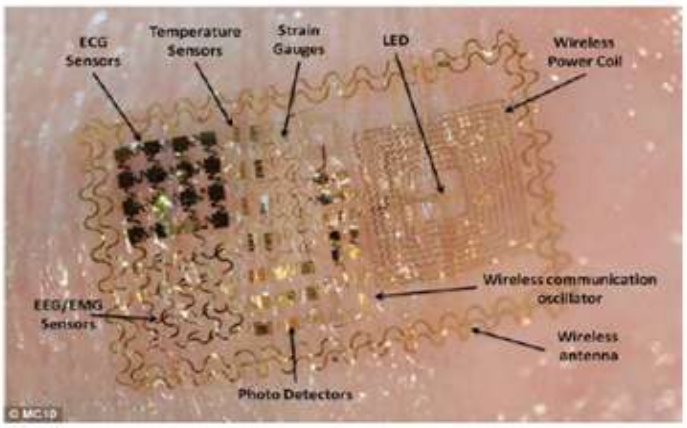


Fig. 2 Architecture of artificial skin

Fig. 1 Artificial Skin

Conclusions

The electronics devices gain more demand when they are compact in size and best at functioning. The Artificial Skin is one such device which depicts the beauty of electronics and its use in daily life. Scientists create artificial skin that emulates human touch. According to experts, the artificial skin is "smarter and similar to human skin." It also offers greater sensitivity and resolution than current commercially available techniques. Bendable sensors and displays have made the tech rounds before. We can predict a patient of an oncoming heart attack hours in advance. In future even virtual screens may be placed on device for knowing our body functions. Used in car dashboard, interactive wallpapers, smart watches.

BEST PROJECTS BY FOLLOWING STUDENTS

S.No.	Name of the Student	Student Roll Numbers	Project Title	Area
1	Shagufta shahnaz	13UP1A0478	Boom Barrier Gate Control using Biometric	Embedded systems
2	Madhuri swapna	13UP1A0455		
3	N.Soumya	13UP1A0464		
4	A.Priyanka	13UP1A0403	Product sorting m/c based on color recognization technique	Embedded systems
5	G. Lavanya	13UP1A0423		
6	K. Jayashree	13UP1A0436		

Shagufta Shahnaz
H.T.No.13UP1A0478

Madhuri Swapna
H.T.No.13UP1A0455

M. Soumya
H.T.No.13UP1A0464

A. Priyanka
H.T.No.13UP1A0403

G. Lavanya
H.T.No.13UP1A0423

K. Jaya Shree
H.T.No.13UP1A0436

WOMEN'S DAY

One of Hyderabad most prominent and reputed institute VMTW College celebrated womanhood on International Women's Day but with a different fervor. Bringing together all the female staffs (teaching and non-teaching, students of final year college decided to hold an interactive session where everyone could put forward their views and perspectives freely.

YOGA DAY

HOLI CELEBRATIONS