Study on Properties of Self Compacting Concrete with Limestone Powder as Mineral Admixture

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ABSTRACT:The Scope of this study is to examine the effect of limestone powder on the properties of SCC has been compared with other additives effect. The dosage of super plasticizer and the limestone powder were taken as 2% and 8% respectively. The replacement of fly ash in the concrete was tested for 10 to 25%. The fresh properties of SCC (L-box test, V-Funnel test, Slump flow test) and hardened properties (Compressive strength, Tensile strength and Flexural strength) are tested. However the result of this study suggests that fly ash and limestone powder combination can enhance the workability better than fly ash and limestone powder alone. The finely ground limestone powder can give better compressive strength development at early age due to the accelerated hydration of C_3S. From this it is possible to improve the mechanical properties of self compacting concrete by using chemical (super plasticizer) and with admixture like limestone powder.

KEYWORDS:SCC, Lime stone powder, fly ash, fresh properties, hardened properties, workability improvement.

1. INTRODUCTION

Self-compacting concrete (SCC) is a recently developed concrete that easily flows under its own weight and requires little or no mechanical vibration to consolidate. It is particularly beneficial in the areas where heavy and closely-spaced reinforcements are needed [1-3]. SCC differs from traditional concrete in that SCC requires a balance between the concrete's flow and cohesion, in order to prevent segregation or bleeding, enabling it to fill the form work easily[4-5]. The balance is achieved by a relatively low yield value that guarantees high flow ability and a moderate viscosity that prevents segregation and bleeding [6]. The concrete's moderate viscosity allows for homogeneity during transportation, placing, curing and to uphold the structural integrity and durability of the concrete [7-8]. Our objective is to find fresh and hardened properties of SCC with limestone powder as mineral admixture.

2. MATERIAL PROPERTIES

2.1 CEMENT

The cement used in production of self-compacting concrete is 43-grade ordinary Portland cement. Testing of cement was done as per IS 2386:1963[9].The various tests were conducted on the cement and the results obtained are reported in table 1.

S. no	Characteristics	Values obtained	Standard values
1	Normal consistency	30%	26-32
2	Initial setting time	37 mins	Not less than 30 min
3	Final setting time	215 mins	Not more than 600 min
4	Specific gravity	3.08	-

Table 1: Properties of cement

STUDY ON PROPERTIES OF CONCRETE WITH PARTIAL REPLACEMENT OF DIFFERENT COMBINATION OF MINERAL ADMIXTURES AS CEMENT

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ABSTRACT: The main objective of this study is to evaluate the properties of concrete with partial replacement of various proportion of mineral admixtures (boron glass powder, fly ash and Silica fume) as cement. The performance of partial replacement of cement by Boron Glass Powder separately and also in combination with fly ash and silica fume in mortar was evaluated in this work. firstly, boron glass powder was replaced 5 % to 30 % as cement (BG5, BG10, BG15, BG20, BG25, BG30) was casted and properties were tested and noted. Also, the compressive strength for Concrete blended with boron glass powder and Fly ash, silica fume in various proportion were calculated. The experimental results show that concrete with 10 percentage Boron glass powder as cement gives maximum compressive strength comparing other mixes (BG5, BG15, BG20, BG25, BG30). Also, we found, the mortar cube which is made of silica fume with boron glass powder produces higher strength when comparing to mortar cube made from glass powder and glass powder with fly ash. From the test results it is concluded that the combined use of waste glass powder with silica fume will be beneficial in quality and economical aspect.

Keywords: Boron glass powder, Silica fume, Fly ash, Compressive strength, Mineral admixtures, concrete properties

1. INTRODUCTION

Concrete is characterized with durability and strength. It has emerged as the primary construction material for the 21st century's infrastructure demands. Concrete is employed in all types of structural systems because, in addition to being robust, it is easily manufactured and manufactured from readily available materials [1-5]. When the replacement level of borosilicate glass powder in cementitious materials is between 20 and 25% by mass of cementitious materials, the best results are obtained [6]. The phosphate removal potential of FPWC made from discarded concrete blocks was sufficient [7]. AAMs made with BGWNP have proven to be beneficial to the environment by reducing global warming [8]. In concrete, silica fume and waste glass will improve workability and durability [9-12]. At the age of 28 days, the compressive strength of concrete with FA at 25% cement replacement was equal to that of the reference 0% replacement concrete [13]. Depending on the classification the performance of fly ash in concrete will vary [14]. For the fabrication of structural concrete elements in the construction industry, SFA has the potential to replace cement by up to 50% [15]. The use of SiO2-rich materials had a negative impact on the residual strength [16]. Early age strength, drying shrinkage cracking tendency, and thermal cracking resistance of fly ash cement concrete are all improved by increasing C3S content in the base cement [17]. From previous research we

Glass Ceiling: A study on equal opportunities in workplace

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Abstract: *Not decades, centuries of progress in all fields but still if we consider equal or upper part of the earnings, women remain underrepresented which is a phenomenon referred as "glass ceiling". Not only in case of women, members of demographic minority are also gets suppressed for their advancement within the hierarchy in an organization. "Glass ceiling is a metaphor in which glass is described as invisible barriers through which women or demographic minority can see elite positions but cannot reach them which is known as "ceiling". In this paper the issues and challenges faced by the women and ethnic minority for obtaining and securing the most powerful, prestigious, and highest-grossing jobs in the workforce is covered by giving some live findings and suggestions. This paper work is only an exploratory nature which is based on some data collected from different resources like journals, magazines and internet. Several cases can be discussed where women and ethnic minority became successful and gave mutual benefits for the organization because of their family support and proper encouragement by respective organization. If women learns to balance the resources they get like time, ideas, finance and relationships, they can excel in any sector which they wish for. This paper can play an important role and can inspire higher officials and organizations to bring certain changes towards ethnic minority and female working conditions so that they can utilize their capabilities for a better life and overall growth of the society.*

Index Terms - **Glass Ceiling, Minority, Discrimination, Organizational Barrier, Women Empowerment.**

I. INTRODUCTION

If labor markets are considered, there is significant growth but in case of women as of today they are underrepresented and the privileges to sit in higher positions are not given to them. For the development and to raise the economic levels of the country women empowerment is an important element. For past few decades, female employment can be seen in all kind of sectors and they are actively employed in those areas where only men are supposed to employ. Female labor force are very limited in senior management levels. If facts are to be considered the women will represent equally in every work-force but hardly present in the higher positions which is described as "Glass Ceiling". Means "a barrier so subtle that it is transparent, yet so strong that it prevents women and minorities from moving up in the management hierarchy". (Glass Ceiling: What Keeps Women from Advancing to Higher Ranks?, n.d.)

It is said that Marilyn Loden was the first person to use the term Glass ceiling during a speech in 1978. But according to Wall Street Journal, the word Glass ceiling was first originated in 1978 by Katherine Lawrence and Marianne Schriber at Hewlett-Packard. According to them, the ceiling was described as the "Discriminatory promotion patterns where the written promotional policy is non-discriminatory, but in practice denies promotion to qualified females". They delivered this speech at press meeting held at Women's Institute for Freedom of the Press in an annual conference.

Later in March 1984 this term was used by Gay Bryant who was the former editor of a magazine called "Working Women". In that magazine she published a report on succeeding in Business in the 1980s in which the term Glass ceiling was used. Then in March 1986, the word Glass ceiling was widely cited in the "Wall Street Journal" with the article name "Glass Ceiling: Why Women Can't Seem to Break the Invisible Barrier That Blocks Them from the Top Jobs". This article was written by Timothy D. Schellhardt and Carol Hymowitz in which they said "not something that could be found in any corporate manual or even discussed at a business meeting; it was originally introduced as an invisible, covert, and unspoken phenomenon that existed to keep executive level leadership positions in the hands of Caucasian males". (Glass Ceiling: What Keeps Women from Advancing to Higher Ranks?, n.d.)

Initially this Metaphor was only used for females who faced barriers in their life for carrier growth but later it was quickly extended to the difficulties and obstacles faced by minority men in the advancement of their carrier. To conclude that a Glass ceiling exists, David Cotter et al. described four distinctive characteristics, they are:

- "A gender or racial difference that is not explained by other job-relevant characteristics of the employee."
- "A gender or racial difference that is greater at higher levels of an outcome than at lower levels of an outcome.
- "A gender or racial inequality in the chances of advancement into higher levels, not merely the proportions of each gender or race currently at those higher levels."
- "A gender or racial inequality that increases over the course of a career."

The present paper is carried out to share the knowledge of Glass ceiling and its effect in Indian working sector specially focused on women and minority work force conditions. The main objective of this paper is to collect information and gain knowledge about this topic so that a better understanding can be made for its proper implication and roles. With the help of this paper, it can act as a foundation for the future research work carried out in this area. The present paper is conceptualized and gives the information collected from different sources with some examples and is totally exploratory nature.

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RESEARCH ARTICLE OPEN ACCESS

Synthetic Video Sequence for Dynamic Scenes

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Abstract:

New methodologies in picture and video preparing fields require an engineered dataset for testing the execution of their calculations keeping in mind the end goal to enhance their results. A considerable lot of these methodologies rely upon a settled lighting suspicion. In reality, video reconnaissance might be presented to various enlightenment or lighting conditions. In this paper, a calculation for creating a dynamic foggy video dataset utilizing Gaussian channel and Random Number Generator is proposed to reproduce this present reality scenes under various brightening or lighting changes. The outcomes demonstrated that the proposed technique can be utilized to create obscured video dataset from the first video dataset under various light conditions.

I. INTRODUCTION

New calculations for reconnaissance frameworks may at first be tried utilizing engineered video arrangements which are helpful as ground truth information. For dynamic continuous scenes, at some point reconnaissance video is caught inside various imperative conditions. Changes in lighting conceivably cause commotion or obscure in reconnaissance video grouping in scenes.

Continuously, under changes in enlightenment conditions, numerous methodologies can fall flat since they relied upon the single light assumption. light suspicion. In our past work, the proposed calculation produces engineered hazy video dataset to reenact the genuine video dataset that caught under brightening changes. This calculation utilized the averaging channel and the Random Number Generator to create such information.

II. DESCRIPTION

A. Irregular Number Generator

Characterize a Random number capacities are utilized to produce a grouping of arbitrary numbers. In MATLAB, " Randn " work delivers an arrangement of arbitrary numbers that have a Normal dispersion with mean(μ)=0 and variance(σ2)=1. The idea of arbitrary number generator (RNG) [12] that if X is an irregular variable, the arbitrary number can be characterized by:

$R=\alpha X+\beta$ (1)

Where α and β are constants with mean $\mu_R = \alpha\mu_X + \beta$ and fluctuation $\sigma^2 R = \alpha^2\sigma^2 X$

B. Gaussian filter

Losing of the high recurrence content in a picture prompts obscuring. The most widely recognized approach of the obscure bit is the Gaussian channel. A component of the 2-D Gaussian portion of the size (m, n) can be characterized as:

$$G_{2D}(x, y)=\frac{1}{2\pi\sigma^2} e^{\frac{-x^2+y^2}{2\sigma^2}}$$

σ is standard deviation and $\sigma>0$

The coefficients of the channel are expanded in remove from the part's inside. More noteworthy obscuring is acquired by expanding bit esteems. In the event that the picture sharpness is obscured by Gaussian channel, the dim levels of

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A Novel Approach to Detect Lung Cancer Cells Using Latest Image Processing Techniques

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Abstract:

The significant reason for growth demise is lung tumor. Location of growth in the early stage can give greater treatment choices, less intrusive surgery and builds the survival rate. A mass of tissue that begins by a moderate advancement of abnormal cells is known as a tumor. Generally, in our body the cells get developed, kicks the pail and a short time later they are supplanted by as of late imagined cells. Into a development. Tumor has been basically arranged into basic and discretionary tumors. The Computed Tomography (CT) pictures are used which are more capable than X-shaft. In this work a methodology to perceive lung danger by using picture getting ready strategies which consolidates picture pre-taking care of, picture division, feature extraction and gathering framework is utilized. Tumor cells are recognized in lung danger CT pictures by using marker controlled watershed change and k-infers gathering.

Used techniques:

Growth Detection, Marker Controlled Watershed Transform, k implies grouping, Thresholding, MATLAB2013a

I. INTRODUCTION

Investigation is generally in light of CT clear pictures. Cancer-causing tumor starts in the bit of lung is called basic lung harm. Taking after are the sorts of this lung malady and these are secluded into two guideline sorts:

1. Little cell tumor
2. Non-little cell tumor

This work focuses on finding tumor and its stages. In this Marker-controlled Watershed division is used to separate a lung of a CT picture.

II. Writing Survey

In this they proposed a technique for recognizable proof of tumor cells from Lung CT channel pictures. This work acquaints a strategy with perceive the development cells from the CT look at picture

It relies upon Sobel edge area and stamp arrange. Sobel director finds the edges in a photo. It does in that capacity by finding the photo point. Picture edge gives the change in the energy of the photo. In like manner, in a structure using Computer Aided

RESEARCH ARTICLE OPEN ACCESS

Fast Recognition of Human Climbing Fences in Transformer Substations

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Abstract:

There are around several thousand transformer substations with a volume over 110kv in China. Working as the key turns to lift and lessening voltage between producing stations and power purchasers. The transformer substations assume a critical part in control framework by considering the electro-attractive radiation created by transformers and the exchange off about suitable separation between producing stations and substantial urban communities, The transformer substations are typically situated in uninhabited and devastate zones which are missing of cutting edge adequate foundations and auspicious salvages when threats happen coincidentally. So it has been of imperative significance to screen transformer substations particularly the staff's strange practices which have realized a lot of mischance in the previous years.

Keywords — Gaussian mixture model; histogram of oriented gradient; support vector machine; improved Hough transform; Sparse Optical Flow.

I. INTRODUCTION

There are around several thousands transformer substations with a volume over 110kv in China. Working as the key turns to lift and decreasing voltage between producing stations and power customers. The transformer substations assume an imperative part in control framework by considering the electro-attractive radiation created by transformers and the exchange off about suitable separation between producing stations and substantial urban communities, The transformer substations are typically situated in uninhabited and destroy zones which are missing of cutting edge adequate foundations and opportune salvages when threats happen coincidentally. So it has been of imperative significance to screen transformer substations particularly the staff's unusual practices which have achieved a lot of mischances in the previous years.

The acknowledgment of human climbing wall is brimming with an incentive in observation framework. Yu et al. proposed a framework that identifies people climbing wall from monocular video. They assembled a few pieces in view of discrete shrouded Markov show (HMM) with predefined activity classes as the states to dissect the subsequent time arrangement. In, Yu et al. built up their calculations with two extra advances. Initially, they removed a component vector from each casing.

RESEARCH ARTICLE OPEN ACCESS

WIFI BASED AGRICULTURE ENVIRONMENT MONITORING SYSTEM USING ANDROID MOBILE APPLICATION

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Dear sir/madamthis my B.Tech project

Abstract:

Agriculture is the primary occupation in our country for ages. But now due to migration of people from rural to urban there ishindrance in agriculture. So to overcome this problem we go for smart agriculture techniques using IoT. This project includes various features like Wi-Fi based monitoring, moisture & temperature sensing, intruders scaring, and proper irrigation facilities. It makes use of wireless sensor networks for noting the soil properties and environmental factors continuously. Various sensor nodes are deployed at different locations in the farm. Controlling these parameters are through any remote device or internet services and the operations are performed by interfacing sensors, Wi-Fi, with microcontroller. This concept is created as a product and given to the farmer'swelfare

INTRODUCTION TO SMART AGRICULTURE:-

As the world is trending into new technologies and implementations it is a necessary goal to trend up in agriculture also. Many researches are done in the field of agriculture. Most projects signify the use of wireless sensor network collect data from different sensors deployed at various nodes and send it through the wireless protocol. The collected data provide the information about the various environmental factors. Monitoring the environmental factors is not the complete solution to increase the yield of crops. There are number of other factors that decrease the productivity to a greater extent. Hence automation must be implemented in agriculture to overcome these problems. So, in order to provide solution to all such problems, it is necessary to develop an integrated system which will take care of all factors affecting the productivity in every stage. But complete automation in agriculture is not achieved due to various issues. Though it is implemented in the research level it is not given to the farmers as a product to get benefitted from the resources. Hence this paper deals about developing smart agriculture using IoT and given to the farmers.

LITERATURE SERVEY:-

The existing method and one of the oldest ways in agriculture is the manual method of checking the parameters. In this method the farmers they themselves verify all the parameters and calculate the readings. [1]It focuses on developing devices and tools to manage, display and alert the users using the advantages of a wireless sensor network system. [2]It aims at making agriculture smart using automation and IoT technologies. The highlighting features are smart GPS based remote controlled robot to perform tasks like weeding, spraying, moisture sensing, human detection and keeping vigilance.

RESEARCH ARTICLE OPEN ACCESS

A Methodology for Extracting Standing Human Bodies from Single Images

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ABSTRACT

Extraction of the picture of human body in unconstrained still pictures is trying because of a few components, including shading, picture commotion, impediments, foundation mess, the high level of human body deformability, and the unhindered positions due to all through the picture plane pivots. We propose a base up approach for human body division in static pictures. We disintegrate the issue into three successive issues: Face discovery, abdominal area extraction, and lower body extraction, since there is an immediate combine insightful relationship among them.

Index Terms: Adaptive skin detection, anthropometric constraints, human body segmentation, multilevel image segmentation.

I. INTRODUCTION

In this examination, we propose a base up approach for human body division in static pictures. We decay the issue into three consecutive issues: Face location, abdominal area extraction, and lower body extraction, since there is an immediate match shrewd relationship among them. Face identification gives a solid sign about the nearness of people in a picture, significantly diminishes the scan space for the abdominal area, and gives data about skin shading. Face measurements likewise help in deciding the measurements of whatever remains of the body, as indicated by anthropometric limitations. This data controls the look for the abdominal area, which in turns drives the scan for the lower body. Also, abdominal area extraction gives extra data about the situation of the hands, the location of which is critical for a few applications.

The fundamental units whereupon estimations are performed are super pixels from numerous levels of picture division. The advantage of this approach is twofold. To start with, various perceptual groupings uncover more significant relations among pixels and a higher, be that as it may, conceptual semantic portrayal. Second, a commotion at the pixel level is smothered and the area insights take into consideration more proficient and hearty calculations. Rather than dependingon act estimation like an underlying advance or making Strict stance presumptions, we authorize delicate anthropometric limitations to both inquiry a non specific stance space and guide the body division process. A vital standard is that body districts ought to be contained by fragments that show up unequivocally inside the estimated body areas and feebly in the comparing foundation. Without making any suppositions about the closer view and

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IOT BASED SMART ROADS INTELLIGENT HIGHWAYS WITH WARNING MESSAGE AND DIVERSIONS ACCORDING TO CLIMATE CONDITIONS

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ABSTRACT:

The aim of our work is to find the vehicle accident location by means of sending a message using a system which is placed inside of vehicle system An intelligent Highway is an innovative concept for smart roads of future smart cities. It is a program of innovation that links a different way of looking at things with innovative ideas that apply the opportunities offered by new technologies in smart ways. Nowadays safety on road has become an important factor in our life because there is an increasing amount of accidents on the road and there are some places where accident occur frequently such as crossings, turns. Also there is a big problem of traffic jams on the road. So we are designing a system that is "An Intelligent Highway system with (Weather Accidents Landslides and traffic) W.A.L.T." which is an innovative concept to maintain safety on roads. In this project, we present a low cost innovative technology for smart roads. We are implementing "Smart traffic" by using IR sensors, light sensors and IOT devices.

KEYWORDS: Accidents,Smart highways, IOT devices, Wi-Fi module, IR sensors, Light sensors.

INTRODUCTION:

The Internet Of Things(IOT) is the network of physical objects-devices, vehicles, buildings and other items-embedded with electronics, software, sensors and network connectivity that enables these objects to collect and exchange data. The IOT allows objects to be sensed and controlled remotely across existing network infrastructure, creating opportunities for more direct integration of the physical world into computer-based systems, and resulting in improved efficiency, accuracy and economic benefit. When IOT is augmented with sensors and actuators, the technology becomes an instance of the more general class of cyber-physical systems, which also encompasses technologies such as smart grids, smart homes and smart cities. Each thing is uniquely identifiable through its embedded computing system but is able to interoperate between the existing internet infrastructures. This paper proposes a system for smart highways of future cities. Common city roads have to face many problems such as traffic jams which cause loss of valuable time. And also there is no display indication on our roads showing traffic conditions in the city. This paper proposed a wireless sensor based system which will be situated in

National Conference On Emerging Trends In Information, Management And Engineering Sciences NC'e-TIMES #1.0-2018

RESEARCH ARTICLE OPEN ACCESS

A Novel VLSI Design of High-Performance Multiplier Using Latest Trending Adders

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ABSTRACT

The execution of increase as far as speed and power is vital for the vast majority of the Digital Signal Processing (DSP) applications. Numerous analysts have concocted different multipliers, for example, cluster, Booth, convey spare, Wallace tree and changed Booth multipliers. In any case, for the present day applications Vedic multipliers in view of Vedic Mathematics are by and by under concentration because of their rapid and low power utilization. In this paper, we propose a plan of 8 – bit multipliers utilizing quick adders (convey spare viper, kogge-stone snake and convey select snake) to limit the power defer result of multipliers expected for high performance applications. Execution comes about show that the proposed Vedic multipliers with quick adders truly accomplish critical change in deferral and power-postpone item when contrasted and the ordinary multipliers.

Used Techniques—Vedic multiplier, convey spare exhibit, powerdelay item, convey select viper, kogge-stone snake

I INTRODUCTION

Multipliers assume critical part in numerous DSP applications, for example, convolution, Fast Fourier Transform (FFT), Discrete Cosine Transform (DCT) and separating. The speed of the DSP's to a great extent relies upon the multiplier square. This thus builds the interest for rapid multipliers. In the course of recent years , numerous scientists have created different multipliers utilizing a few calculations, for example, exhibit, Booth, convey spare, Wallace tree and changed Booth calculations. Various multiplier designs likewise have been proposed in view of these calculations that incorporate parallel, serial and serial-parallel multipliers.

In the Wallace tree method, three bit signals are passed to a one bit full adder ("3W") which is called a three input Wallace tree circuit, and the output signal (sum signal) is supplied to the next stage fulladder of the same bit, and the carry output signal thereof is passed to the next stage full adder of the same no of bit, and the carry output signal thereof is supplied to the next stage of the full adder located at a one bit higher position. The major improvement in the multipliers is by reducing the number of partial products generated. The Booth multiplier and modified Booth encoded Wallace

National Conference on Emerging Trends in Information, Management and Engineering Sciences (NC'e-TIMES#1.0) – 2018

RESEARCH ARTICLE OPEN ACCESS

Implementation of Biometric Recognition System Based on Dorsal Hand Veins using Hybrid Algorithms

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ABSTRACT:

The 'Biometric Recognition System Based on Dorsal Hand Veins' is one of the biometric techniques which introduces the design and implementation of a system for identifying a person based on their dorsal palm vein pattern. The main aim has been to build a unique, cheap and reliable system as an alternative to Contact Based systems. Near Infrared camera images have been used since this leads to clear production of veins required for the ideal working of system. The first step is to pre-process the image and find the knuckle profile using grayscale thresholding and image inversion. Image segmentation is performed on the image to get the significant edges. The image is then processed to remove noise, and using morphological operations the vein pattern is signified. The region of interest is then cropped and a 1-pixel thick skeleton pattern is obtained using image thinning which is used as a feature for matching and recognition. Triangulation method using Delaunay's principle is used to find vein bifurcations and endings using local thresholding. Finally triplets are matched and used as a parameter to compare image stored in database and input image.

Keywords: - Digital Image Processing, Biometric, Dorsal Hand Veins, Vein recognition.

INTRODUCTION

Biometrics is a field where individual is identified based on his natural traits inherent to his physical features. Biometric recognition is important in the ongoing digital age to curb security threats as no other security system provides better accuracy, reliability, as well as a sustainable system wherein a database can be created and stored. Traditional and famous biometric techniques contain finger, face and iris. Most of the biometric systems in the market today like fingerprint and hand geometry are based on contact-based design. There has always been a need to identify individual biometrics; however there is a lot of demand and change procured in the structure of biometric system as demography has been increasing at rates unprecedented and as individuals have become more migratory, technosavvy and internet accustomed. Biometric technologies have proven to be competitive in comparison with other authentication systems (e.g. Based on Pin, password, RFID etc.).

RESEARCH ARTICLE OPEN ACCESS

A Novel VLSI Architecture for Encryption for Wireless Body Sensor Networks

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ABSTRACT

This paper shows a substantial scale mix (VLSI) circuit outline of a miniaturized scale control unit (MCU) for remote body sensor systems (WBSNs) in cost-aim. The proposed MCU configuration comprises of an offbeat interface, a multi-sensor controller, an enlist bank, an equipment shared channel, a lossless compressor, an encryption encoder, a blunder adjust coding (ECC) circuit, a widespread nonconcurrent recipient/transmitter (UART) interface, a power administration, and a QRS complex locator. An equipment sharing procedure was added to diminish the silicon region of an equipment shared channel and gave works as far as high-pass, low-pass and band-pass channels as indicated by the utilizations of different body signals. The QRS complex indicator was intended for computing QRS data of the ECG signals. Furthermore, the QRS data is useful to acquire the heartbeats. The lossless compressor gives different strategies to pack the distinctive attributes of body flags adaptively.

I. INTRODUCTION

Nowadays, applications of wireless body sensor networks (wbsns) have become wider and wider. these applications provide an effective solution for sustained monitoring, mobile health, self-health management and biological analysis in home-care system. in the future trend of development, such as wireless sensor system for analyzing infectious disease nodes and efficiently protecting sensitive personal data in network security etc., the usage of wbsns technique is improved rapidly. as the demand of light-weight for wearable and portable applications, development of an efficient device to monitor physical signals via the vlsi technique has become a significant trend. many high-performance sensors have been proposed for physical signal proposed an efficiency complementary metal-oxide-semiconductor (physical signals, the WBSNS suffered from the limitation of wireless transmission bandwidth, computing resource and energy in batteries.

II. WIRELESS BODY SENSOR NETWORK SYSTEM

Typical WBSNs is composed of a group of wireless sensor nodes. Each node includes sensors such as physical sensors, image sensors, an analog-to-digital converter (ADC), a micro control unit (MCU), and a wireless transceiver with an antenna. In WBSNs applications, different physical signals, such as Electroencephalography (EEG), electrocardiogram (ECG), thermal, and blood pressure (BP), are captured by different sensors.

Finally, the medical expert can decrypt the ciphertext by a decryption algorithm, analyze the recorded data, and be able to timely provide medical service such as telemedicine or medical consultation. The 2.4 GHz band communication system module will be compatible with different sensor nodes for different types of monitoring

RESEARCH ARTICLE OPEN ACCESS

Development of Efficient VLSI Architecture for Speech Processing in Mobile Communication

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Abstract:

Plan of Specific design for a given application is especially important to take care of the present day complex issues. Ease VLSI structures are utilized to manage these endeavors. Since mobiles telephones for utilized worldwide in expansive numbers, creating committed equipment on high volume items like these will profit VLSI monetarily. Some VLSI approaches are monetarily achievable in structural combination of computerized flag handling frameworks. These methodologies are extremely fundamental in low volume to medium volume DSP applications. Discourse Processing is one of the complex DSP strategies in cell phone since it includes; discourse acknowledgment, clamor concealment, hush recognition, pitch investigation and may more. VLSI programmable innovations, for example, FPGA, which is are prescribed for low value VLSI, is utilized broadly in showcase. In this paper we have created one such application particular engineering for smothering encompassing commotion in the portable correspondence

Keywords — VLSI, DSP.

I. INTRODUCTION

Discourse is the most critical medium of human correspondence. With the assistance of current sound flag preparing we speak with human as well as we interface with machines. The advanced flag handling jelly and improves the nature of discourse signals. Computerized processor deals with advanced portrayal, where an assortment of complex advanced flag handling philosophies are diverted to enhance the nature of signs. New advance in flag preparing hypothesis, together with progress in flag handling gadgets, the utilizations of discourse handling have turned out to be wherever finished the most recent decade. In late time there are different angles in preparing of discourse, for example, upgrade of loud discourse, discourse and speaker acknowledgment, versatile channels, reverberate scratching off, dynamic commotion crossing out, sound quality assessment, sound and discourse watermarking, advanced channels for sound impacts, and discourse hardware for dialect therapy. Flag preparing has been gainfully used to propel the life nature of people with hearing issues.

Some of them are advancement of amplifiers gadgets, which endeavor to specifically open up the frequencies in the sound that isn't appropriately seen.

Advancement of the V (Very Large scale coordination innovation) has contributed extraordinarily in usage of exceptionally productive flag handling calculations and furthermore an awesome effect in improving the execution of flag preparing gadgets.

RESEARCH ARTICLE OPEN ACCESS

RFID Based Electricity Billing and Cut-Off System for Energy Through GSM

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Abstract:

The aim of the paper is to minimize the queue at the electricity billing counters and to restrict the usage of electricity automatically, if the bill is not paid. The paper also aims at proposing a system that will reduce the loss of power and revenue due to power thefts and other illegal activities. The work system adopts a totally new concept of "Prepaid Electricity". The GSM technology is used so that the consumer would receive messages about the consumption of power (in watts) and if it reaches the minimum amount, it would automatically alert the consumer to recharge. This technology holds good for all electricity distribution companies, private communities, IT parks and self-containing housing papers.

The prepaid meter is important in making the consumer having sense about his/her energy consumption which is important in eliminating the difficulties facing the electrical utility employee in getting the reading of the conventional electromechanical meter and eliminating any error incurred in bills issuing. This paper is aimed at developing a prototype of a management system for a prepaid electrical power meter. The designed energy meter consists of an RFID reader, a microcontroller, a digital meter and a wireless gateway. The proposed prototype metering system consists of two parts: clients and server. An RFID reader is used to read the ID of the credit card and a PC connected to a hardware simulated circuit which is designed and implemented to simulate the operation of the digital meter. The server is located in the local substation which receives the card's ID from clients and sends ID`s information back to the client after checking and/or updating the database.

. The implementation of this paper will help in better energy management, conservation of energy and also in doing away with the unnecessary hassles over incorrect billing. The automated billing system will keep track of the real time consumption and will leave little scope for disagreement on consumption and billing

Keywords:

Energy meter, GSM technology, Microcontroller LPC 2148, RFID system

Introduction:

The GSM technology is used so that the consumer would receive messages

National Conference on Emerging Trends in Information, Management and Engineering Sciences (NC'e-TIMES#1.0) – 2018

RESEARCH ARTICLE OPEN ACCESS

LFSR-Based Generation of Multi-Cycle Tests

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Abstract:

This paper delineates about the procedure of time of multi cycle tests which check in states are stuffed in to seeds for a LFSR and whose basic information vectors are held predictable in the midst of the usage of a multi cycle test. The key subject of multi cycle tests is to give test compaction that reduces the both application time and data volume. This LFSR avoids the progressive test age, the customers use a single cycle tests to coordinate with figure the multi cycle tests. The customer upgrades each multi cycle test, and addition the amount of weaknesses its recognizes, and change its speed, input vector and number of clock cycles. Optimizing the speed in scan-in state avoids the number of functions of scan-in states for which seeds does not exists. Benchmark circuits are presented to demonstrate the effectiveness of the LFSR-Based generation of multi-cycle tests.

Used words: Test age, Multi-cycle tests, Test compaction, Test information pressure

I. INTRODUCTION

A direct criticism move enlist resembles a move enlist with input. The yields of a portion of the flipflops in the move of XOR door is the contribution to the primary flipflop in the principal move enlist. The underlying quality put away in the move enlist is known as the seed esteem and it can never be every one of the zeros. Contingent upon the yields input to the XOR door a LFSR produces an irregular succession of bits. Due to this property LFSRs are utilized as a part of correspondence and blunder remedy circuits for producing pseudo-clamor and pseudo-irregular number arrangements and they are additionally utilized as a part of information encryption and information pressure circuits in cryptography.

In this LFSR the sweep in and examine out activities of a solitary test cycle has a solitary capacity unit, while a multi cycle test has at least one number of useful clock cycles. Multi cycle test where considered as the successful test compaction and the outcome from the perception will be seen by the LFSR. Amid the practical clock cycle the combinational rationale of the circuit gets an information design that can be utilized for identifying issues. An expansive number of utilitarian clock cycles enables more blames to be recognized. Subsequently, multi cycle test may identifies more blames contrasted with single-cycle test. With more distinguished flaws for each test cycle the deficiencies will decreased. This lessens a few sweep tasks that a test set requires. With few output tasks, the information volume and the application time will be lessened. The way that each test comprises of more practical clock cycles negligibly affects the test application when the

National Conference On Emerging Trends In Information, Management And Engineering Sciences
NC'e-TIMES #1.0-2018

RESEARCH ARTICLE OPEN ACCESS

EASY BILLING SYSTEM FOR SHOPPING MALL

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Abstract:

Everyone knows the importance of time in this competition world and no one wants to waste their time in doing regular things. If we consider any shopping mall we have to wait much time for billing even though you purchase little things and we are not aware of cost of the product that we wanted to purchase.

With the help of this proposed system, we reduce the billing time and customers can know the exact cost of the products that they purchased before billing so that they can do their shopping within their budget. RFID is a key technology that we are using in this project.

The objective of this proposed system is to reduce billing time and to know customers about their billing cost. This proposed system is designed by using RFID system in the shopping trolley.

The proposed system can be implemented in supermarkets, shopping malls for purchasing the products.

Keywords: **Shopping Cart, RFID, Zigbee, ARM7(LPC2148), MAX232**

INTRODUCTION

It is a new advertisement and shopping guide system for large super markets based on wireless networks. The wireless touch panel is integrated in the shopping cart can automatically broadcast the commodities advertisements when the cart moving in RFID tags are given for the each product. So, when tag is placed near the reader, it takes information from the tag and sends the information to the controller. With the help of touch panel we can accept or reject the products.

Zigbee transmitter and receiver are used for wireless transmission. The goods which are selected will be automatically registered in pc of billing section. Now, no wastage of time in billing section. This system will be very easy for the customers as well as for the manpower.

AIM OF THE PROPOSED SYSTEM

The objective of the proposed system is reducing man power effort and saving time to the customers with hi-tech billing system.

It proposes a new advertisement and shopping guide system for large supermarkets based on wireless sensor network. RFID reader integrated in the shopping cart can automatically broadcast the commodities advertisements when the cart moving in the large supermarket.

National Conference On Emerging Trends In Information, Management And Engineering Sciences NC'e-TIMES #1.0- 2018

RESEARCH ARTICLE OPEN ACCESS

DFT Computation using Gauss-Eisenstein Basis: FFT Algorithms and VLSI Architectures

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Abstract:

A joint numerical representation based on both Gaussian and Eisenstein integers is proposed. This Gauss-Eisenstein representation maps complex numbers into 4-tuples of integers with arbitrarily high precision. The representation furnishes the computation of the 3-, 6-, and 12-point discrete Fourier transform (DFT) at any desired accuracy. The associated fast algorithms based on the Gauss-Eisenstein integers are error-free up to the final reconstruction step, which can be realized in hardware as a multiplier less implementation. The introduced methods are compared with competing algorithms in terms of arithmetic complexity. We propose three FRS architectures based on the following methods: Dempster-McLeod representation, expansion factor, and addition aware quantization.

Introduction

Fixed-point number representations are often employed in digital signal processing (DSP) architectures Nevertheless, such representations may not be the ideal approach when non-rational quantities are required to be represented Indeed, several quantities in common mathematical methods are not perfectly represented in usual finite binary representation. For instance, the roots of unity, which are employed in the discrete Fourier transform (DFT) computation, are not necessarily rational numbers Representing such quantities in fixed-point requires the adoption of compromise solutions involving truncation and/or rounding-off operations Such approximations systematically introduce errors, which may propagate throughout a given computational architecture This fact results in an Algebraic integer (AI) encoding technique provides a means to address this problem Introduced by Cozzens and Finkelstein AI encoding consists of mapping possibly irrational numbers into integer vectors that can be processed in an error free arithmetic framework.

Indeed, literature presents several AI based architectures. For instance, we may cite applications in: DSP systems based on Eisenstein residue number systems (RNS) row-parallel 8×8 2-D DCT architectures; real orthogonal transform implementation using RNS; and VLSI architectures for the 4- and 6-tap 2-D Daubechies wavelet filters. Among the DSP methods, the DFT occupies a central position. The design of efficient DFT

RESEARCH ARTICLE OPEN ACCESS

An Algorithm for Haze removal from images

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Abstract:

Image dehazing plays an important role in image processing. Many researchers have suggested many techniques like histogram equalization and gamma transformation in order to reach the target. But these techniques have many limitations like different degree of polarization, different kind of weather conditions or depth information of pixel in image. The proposed work has tried to develop a more effective and improve image quality assessment method that can evaluate the quality of the proposed dehazing algorithms. The overall objective of this paper is to explore the short comings of the earlier presented techniques used in the revolutionary era of image processing applications. As compared to previous work it provides better results.

Introduction

In this topic various articles have been suggested for haze removal from images. Existing literature also addresses the issue of noise that has relied on multiple images either for de-noising prior to dehazing or in the dehazing processes itself. It is difficult to find a sequence of images or multiple images at the same time. So, single image based approaches are one of the most successful with the consideration of the "dark channel prior". Haze removal (or dehazing) is highly desired in both consumer/computational photography and computer vision applications. First, removing haze can significantly increase the visibility of the scene and correct the color shift caused by the air light. In general, the haze-free image is more visually pleasing. Second, most computer vision algorithms, from low-level image analysis to high-level object recognition, usually assume that the input image (after radiometric calibration) is the scene radiance. The performance of vision algorithms (e.g., feature detection, filtering, and photometric analysis) will inevitably suffer from the biased, low contrast scene radiance. Last, the haze removal can produce depth information and benefit many vision algorithms and advanced image editing. Haze or fog can be a useful depth clue for scene understanding. The bad haze image can be put to good use. However, haze removal is a challenging problem because the haze is dependent on the unknown depth information. The problem is under-constrained if the input is only a single haze image. Therefore, many methods have been proposed by using multiple images or additional information. Polarization based methods remove the haze effect through two or more images taken with different degrees of polarization. More constraints are obtained from multiple images of the same scene under different

National Conference On Emerging Trends In Information, Management And Engineering Sciences
NC'e- TIMES #1.0-2018

RESEARCH ARTICLE OPEN ACCESS

Approximate Error Detection with Stochastic Checkers

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Abstract:

Outlining dependable frameworks, while shunning the high overheads of customary adaptation to non-critical failure systems, is a basic test in the profoundly scaled CMOS and post-CMOS time. To address this test, we use the inherent flexibility of use spaces, for example, interactive media, acknowledgment, mining, seek, and investigation where worthy yields are expert duced notwithstanding periodic rough calculations. We propose stochastic (checkers composed utilizing stochastic rationale) as another way to deal with performing mistake checking in an inexact way at incredibly decreased overheads. Stochastic checkers are characteristically off base and require long latencies for calculation. To constrain the misfortune in mistake scope, and in addition false positives (adjust yields flagged as incorrect), caused because of the estimated idea of stochastic checkers, we propose input permuted fractional imitations of stochastic rationale, which enhances their precision with negligible increment in overheads. To address the test of long mistake discovery inertness, we propose dynamic checking strategies that give an early choice in view of a prefix of the checker's yield bitstream. This procedure is additionally upgraded by utilizing continuously precise parallel to-stochastic converters. Over a suite of mistake strong applications, we watch that stochastic checkers prompt extraordinarily lessened overheads (29.5% region and 21.5% power, all things considered) contrasted and conventional adaptation to internal failure systems while keeping up high scope and low false positives.

Record Terms—Approximate blunder identification, blame recognition, low power, permuted halfway reproductions, dynamic checking, stochastic registering (SC).

I. INTRODUCTION

SCALING toward the cutoff points of CMOS, and conceivably into the post-CMOS time, is relied upon to be joined by an impressive increment in shakiness because of process, voltage, and temperature varieties, transistor maturing, and early life disappointments. Planners have customarily guaranteed unwavering quality either through overdesign, e.g., outline monitor banding and preservationist working conditions, or by using customary adaptation to internal failure systems in view of excess. These strategies come at a high cost in territory and power, debilitating to extraordinarily reduce the benefits of innovation scaling. In this way, planning dependable incorporated circuits with low overheads is a basic test.We address this test by utilizing a key property of numerous predominant and rising application areas, for example, sight and (sound, video, and picture) handling, machine learning, information mining, seek, and investigation—their calculations might be executed around without significantly affecting the nature of results. We propose that these applications might be planned with inferred blunder checkers that register a guess of the right yield, possibly bringing about a