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Accredited by NAAC
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Estd 2008

3.3.2 Number of research papers in the journals notified on UGC website during the last five years (10)

S.NO	ACADEMIC YEAR	No. of research papers in the journals notified on UGC website during the last five years
1	2020-2021	20
2	2019-2020	25
3	2018-2019	43
4	2017-2018	59
5	2016-2017	32
	Total	179

Principal

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An Experimental Study on Behavior of Partial Replacement of Cement with Ground Granulated Blast Furnace Slag

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ABSTRACT
Concrete has occupied an important place in construction industry in the past few decades and it is used widely in all types of constructions ranging from small buildings to large infrastructural dams or reservoirs.GGBS is obtained from making of iron.It is no use for other things.It pollutes the environmental such as land pollution. water pollution etc..when we use the GGBS in partial replacement of cement it increase the strengths of the cubes as well as decrease the pollution of the environmental.In my investigation GGBS used at 10%,20%,30%,40%,50% for M_{20} and M_{30} 43 grades.It is gives increase strength values at 10%,20% and 30% compared to normal mixes.

Keywords: cement(M_{20},M_{30}),sand,ggbs,fosroc conplast sp 430

I. INTRODUCTION
In India, the production is about 7.8 million tonnes of GGBS as a by-product obtained in the manufacture of pig iron in the blast furnace. Blast furnace slag is a solid waste discharged in large quantities by the iron and steel industry in India. The recycling of these slags will become an important measure for the environmental protection. Iron and steel are basic materials that underpin modern civilization, and due to many years of research the slag that is generated as a by-product in iron and steel production is now used as a material in its own right in various sectors.

II. LITERATURE REVIEW
The first recorded production of portland blast furnace slag cement was in Germany in 1892; the first United States production was in 1896. Until the 1950s, GGBS was used in production of cement or as a cementitious material in two basic ways: as a raw material for the manufacture of portland cement, and as a cementitious material combined with portland cement, hydrated lime, gypsum or a hydrate

Kamran and Usman (2004): conducted a research on GGBS which was collected from steel mills in Karachi (Pakistan) and pulverized to a very fine degree from a pulverizer. They found that there was an appreciable increase in the workability of concrete with increasing percent replacement of cement with GGBS.

Shariq et al (2008): studied the effect of curing procedure on the compressive strength development of cement mortar and concrete incorporating GGBS. GGBS based concrete 40% replacement is found to be optimum.

Nagaraj et al (2011): They made an attempt to minimize the cost of cement with nominal concrete mix grades M20 and M30 by studying the mechanical behavior of these concrete mixes by replacing marginal products such as RHA and GGBS over the increasing cost of cement. They concluded that the partial replacement of such marginal materials can be done by replacing with the cement in percentage wise without altering much the strength of concrete.

III. MATERIALS USED
➢ Cement 43 grade(M_{20},M_{30})
➢ Ggbs(ground granulated blast furnace slag)
➢ Sand
➢ Coarse aggregates
➢ Fosroc conplast sp 430(admixture)

3.1ground Granulated Blast Furnace Slag:
It is obtained from making of iron.This is one type of blast furnace slag.GGBS and finely ground pelletized slag are marketed separately to the concrete producer and used as a partial replacement for portland cement. Replacement dosages between 5% and 70% by mass of cement material are common. Fineness, glass content and mineral constituents are generally considered to be important factors regarding the cement activity of slag.

Benefits of Partial Replacement of Aggregates by Foundry Sand and Waste Rubber in Self Compacting Concrete

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Abstract— Concrete manufacturing industry is the main largest consumer of the natural resources present in the world. Annually billion tons of raw materials, cement, sand and water are used in the manufacturing process of concrete. The over usage of natural resources creates imbalance in ecosystem. Therefore to reduce the usage of natural resources, alternative products are used. In present days only few amount of waste tyres are disposed due to the increase of wide usage of tyres for other recycling purposes. The rubber of old tyres is used for new tyres, agriculture, derived fuel, sports applications, and modified asphalt application and in civil engineering applications. The rubber is used as the modified asphalt process is widely recognized and there are so many future scopes for the incorporation of tyres into asphalt. This technology is used in various construction fields. The success rate of this technology is high in the construction of roads in the last 45 years. This rubber asphalt is produced in the one of the processes of recycled tyre rubber modified bitumen. The process is named as "wet process". For some various quality problems, rubber asphalt is used in spite of some drawbacks. In most of the conditions, rubber asphalt is used in the pavement of roads. But due to the improper information, less support to local policies, lack of proper training, the existing technologies are struggling to adopt. In the present study, the main aim is to find out the usage of waste tyre rubber and foundry sand in manufacturing of concrete. And finally support the technology and help for wide usage in construction field. In this project, self-compacting concrete is used as concrete type. It can be placed and compacted under its own weight without vibration effects. This investigation calculates the strength and durability properties of Self-compacting concrete in which natural sand was partially replaced with waste foundry sand. Here there is an improvement in resistance of concrete against sulphate attack and rapid chloride permeability.

Keywords: Recycled Tyre Rubber, Foundry Sand and Rubber Modified Bitumen.

I. INTRODUCTION

Self-compacting concrete is defined as an innovative concrete which does not require vibration for the purpose of placing and compaction. It can be placed and compacted by its own without any effect of vibration. It was first produced by Japanese in 1987. It reduces the labour and vibration is done

to achieve consolidation. Workability and hardened properties are the main properties of self-compacting concrete. It also named as the best revolutionary development in concrete construction for several years. By considering several factors, it has proven that the self-compacting concrete has many beneficiary effects in the construction field. Following factors are mentioned below.

- Reduced noise levels, absence of vibration
- Easier placing
- Greater freedom in design
- Reduction in site manpower
- Faster construction
- Thinner concrete sections
- Safer working environment
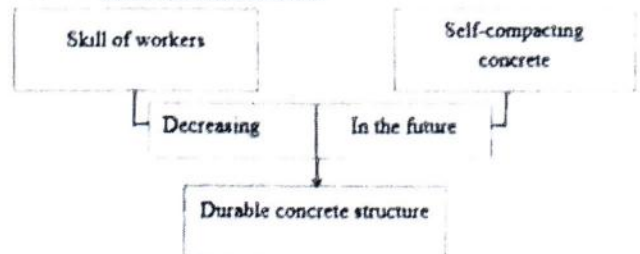- Improved durability
- Better surface finishes

Figure 1: Methodology of self-compacting concrete

There is huge amount of foundry sand and red mud created due to industrialization. Aluminium is used in the manufacturing of red mud which is also termed as industrial wastes and causes threat to environment. It reduces the cost of construction to make concrete structure more durable. In this study following points are evaluated.

1. Study the properties of red mud.
2. Cement is replaced with different percentages of foundry sand.
3. Study the properties of foundry sand.
4. Study the comparativeness.
5. Preparing concrete by blending or by replacing the cement by red mud.

Reduction Of Bio Diesel Emissions By Injection Advance In VCR Engine

CH Uma Chaithanya *
CH Kodanda Rama Rao **

Abstract

Biodiesel in present trend is important due to depletion of non-renewable resources. The shortage of fossil fuels brings usage of bio diesel into limelight. Therefore usage of bio diesel is preferred than usage of conventional diesel as the properties of both are almost same. A lot of research has undergone on bio diesel and doesn't show any significant variation in emissions compared to conventional diesel. Due to high emissions of harmful gases global warming increases which is not preferable. In this paper Flax seed is used for bio diesel preparation which is abundantly available in mountainous areas and cooler regions. Flax seed commonly known as lin seed has binomial name Linum usitatissium. In this process the oil is transesterified using methanol to produce methyl esters in presence of base catalyst. Methanol is mixed with flax seed oil in the ratio 1:5 and 0.5 to 5% base catalyst is added. This mixture is constantly stirred at 55°C.

Due to high viscosity it is difficult for biodiesel to mix with air in the combustion chamber and results in increase of emissions . As the fuel injection is advanced by change in crank angle up to certain extent in a VCR engine, the time available for mixing fuel with air is increased ensuring increased mixing of fuel with air, and By increasing the compression ratio the pressure in combustion chamber increases which helps high viscous fuel to mix completely, due to high temperature because of the high pressure in the combustion chamber the combustion characteristics of charge increased results in lowering the engine emissions. The above tests were conducted using conventional diesel, and different proportions of blends of bio diesel and results were compared by varying crank angle and compression ratios.

Keywords:

Biodiesel,
Transesterification,
Crank angle,
Emissions

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3.3.2 - 4, s.6.7

THERMAL ANALYSIS OF DISCBRAKE ROTOR

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Article Info	ABSTRACT

A brake is a device by means of which artificial frictional force is applied to moving machine part in order to stop the motion of the machine. In this process, the breaks absorb kinetic energy of the moving machine part and convert this kinetic energy in to heat. Basically many brake types are present in this world. But in this present generation Disc Brakes are widely used because of their better performance and more efficiency than other brake types. Basically the Disc brakes contains rotor which lies between two pads operated by piston supported by the caliper. When the brake lever is pressed hydraulically pressurized fluid is forced in to the cylinder and pushing the pistons which is connected to the pads. So pads come in frictional contact with the disc rotor and moving machine part will stop. As we are discussed lot of heat generation will generate when we apply the brake. So we are analyzing heat distribution in Disc Brake Rotor in different materials.

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3.3.2 - 4

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ABSTRACT

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3.3.2 - 4,5,6,7

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"Optimizing Data Encoding technique for Dynamic Power reduction in Network on Chip"

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Abstract:-

As the technology shrinks, the power consumed by the links of a Network On Chip(Noc) is starts to participate with the power dissipated by the elements of the communication systems like Network Interfaces(NIs), routers etc. In this paper we have presented the optimizing data encoding technique by different schemes geared towards to reduce the power dissipated by the links of Network on Chip, that optimizes the on-chip communication system not solely in terms of performance but also in terms of power.

Here, within the proposed work the encoder in LDPC is replaced with our data encoding schemes therefore as to cut back the power consumption in the LDPC techniques. Three schemes join to reduce the dynamic power of the NoCs data path by minimizing the number of bit transitions. Different transitions like odd, even and full are taken into consideration. During this experiment determined that the proposed technique yields sensible ends up in dynamic power reduction.

Index terms-- Data Encoding , Low power, Interconnection on chip, Network Interfaces, Nework-on-Chip(NoC), Low Density Parity Checker (LDPC), Power analysis.

1.Introduction :

As silicon technology scales to next technology, however power demand becomes a primary factor in communication systems. In fact, over 50% of the entire dynamic power is dissipated in interconnects in current processors, and this will be expected to rise to 65%–80% over the succeeding years. The power dissipation is proportional to the switching activity, so reducing the bus switching in an efficient way to reduce the bus power consumption. System-on-Chip is a novel illustration supposed for Network-on-Chip design. NoC based systems contain numerous asynchronous clocks with the aim of today's composite SoCs. NoCs that provides asynchronous communication, scalability, reliability for the NoC paradigm. The essential plan of network-on-chip becomes additional capable owing to its performance, power and scalability requirements for a SoC device. The dynamic power consumption in a NoC grows linearly with the sum of bit transitions in successive information packets sent through the interconnect design to scale back power dissipation in NoCs, in both wires and logic, is to reduce the switching activity by means of coding schemes.

Low density parity check code is an error correcting code used in noisy communication channel for decreasing the probability of loss of information. With LDPC, this probability can be minimized to as tiny as desired, so the data transmission rate is as

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Low density parity check code is an error correcting code used in noisy communication channel for decreasing the probability of loss of information. With LDPC, this probability can be minimized to as tiny as desired, so the data transmission rate is as

3.3.2 - 11   25

Design of Low Power and Area Non-Redundant Radix-4 Signed-Digit (NR4SD) Encoding

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Abstract:

In this paper, we present an engineering of pre-encoded multipliers for Digital Signal Processing applications based on disconnected encoding of coefficients. To this augment, the Non-Redundant radix-4 Signed-Digit (NR4SD) encoding method, which utilizes the digit values $\{-1, 0, +1, +2\}$ or $\{-2,-1,0,+1\}$ is proposed prompting to a multiplier outline with less unpredictable incomplete items execution. Broad trial examination confirms that the proposed pre-encoded NR4SD multipliers, including the coefficients memory, are more area and power productive than the traditional Modified Booth plot.

1. Introduction:

Multimedia and Digital Signal Processing (DSP) applications (e.g., Fast Fourier Transform (FFT), sound/video CoDecs) complete a substantial number of augmentations with coefficients that don't change amid the execution of the application. Since the multiplier is a fundamental part to implement computationally escalated applications, its design genuinely influences their execution. Consistent coefficients can be encoded to contain the slightest non-zero digits utilizing the Canonic Signed Digit (CSD) representation [1]. CSD multipliers contain the least non-zero fractional items,

which in turn diminishes their exchanging action. Be that as it may, the CSD encoding includes genuine constraints. Collapsing method [2], which diminishes silicon region by time multiplexing numerous operations into single practical units, e.g., adders, multipliers, is not doable as the CSD-based multipliers are hard-wired to particular coefficients. In [3], a CSD-based programmable multiplier configuration was proposed for gatherings of pre-decided coefficients that share certain elements. The extent of ROM used to store the gatherings of coefficients is fundamentally diminished and in addition the region and power utilization of the circuit. Nonetheless, this multiplier configuration needs adaptability since the fractional items era unit is composed particularly for a gathering of coefficients and can't be reused for another gathering. Likewise, this strategy can't be effectively stretched out to vast gatherings of pre-decided coefficients accomplishing at the same time high proficiency. Adjusted Booth (MB) encoding [4]–[7] handles the previously mentioned restrictions and diminishes to a large portion of the number of incomplete items coming about to diminished territory, basic deferral and power utilization. Be that as it may, a devoted encoding circuit is required and the incomplete items era is more mind boggling. In [8], Kim et al. proposed a strategy like [3], for planning productive MB multipliers for gatherings of pre-decided coefficients with similar restrictions portrayed in the past section.

3.3.2 - 12

IJESC

Research Article | Volume 6 Issue No. 4

Design and Simulation of EU Slot Microstrip Patch Antenna for Broadband Applications

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Abstract:
The main factors effecting design of antenna are low cost, minimal weight, low profile antennas that are capable of maintaining high performance over a wide spectrum of frequencies. All these factors can be satisfied by Microstrip patch antenna. The paper presents design of a rectangular Microstrip patch antenna array. Array is designed around a operating frequency of 2.40 GHz uses two microstrip patch antenna elements of rectangular shape is presented with simulated results.

Keywords: VSWR, Reflection coefficient, Microstrip patch antenna, Ansoft HFSS.

1. INTRODUCTION

Microstrip patch antennas (also just called patch antennas) are among the most common antenna types in use today, particularly in the popular frequency range of 1 to 6 GHz. This type of antenna had its first intense development in the 1970s, as communication systems became common at frequencies where its size and performance were very useful. Patch Antennas are widely used in microwave frequency region because of their computability with Printed Circuit Board (PCB) technology and its simplicity in manufacture.

However, the bandwidth and the size of an antenna are generally mutually conflicting properties, that is, improvement of one of the characteristics normally results in degradation of the other. Recently, several techniques have been proposed to enhance the bandwidth. While the antenna can be 3D in structure (wrapped around an object, for the elements are usually flat; Hence their other name, planar antennas. Note that a planar antenna is not always a patch antenna. However, these antennas are generally fabricated on thicker substrates (Darren & Aman, 2011). Utilizing the shorting pins or shorting walls on the unequal arms of a E-shaped patch, U-slot patch, or L-probe feed patch antennas, wideband and dual-band impedance bandwidth have been achieved with electrically small size Other techniques involves employing multilayer structures with parasitic patches of various geometries such as E, U and H shapes, which excites multiple resonant modes .

The bandwidth of patch antenna can be increased by the height of the substrate or by decreasing the value of the dielectric constant of substrate.

2. PROPOSED ANTENNA DESIGN

Microstrip patch antenna have been well known for its advantages such as light weight, low fabrication cost,

mechanically robust when mounted on rigid surfaces and capability of dual and triple frequency operations all these features, attract many researchers to investigate the performance of parch antenna in various ways. However, narrow bandwidth came as the major disadvantage for this type of antenna.

Several techniques have been applied to overcome this problem such as increasing the substrate thickness, introducing parasitic elements i.e. co-planar or stack configuration, or modifying the patch's shape itself. Modifying patch's shape includes designing an EU-shaped patch.

E Shape microstrip patch antenna with wideband operating frequency for wireless application will provide the broad bandwidth which is required in various applications like remote sensing, biomedical application, mobile radio, satellite communication etc. The antenna design is an improvement from Previous research and it is simulated using HFSS (High Frequency Structure Simulator) version 12 software. Coaxial feed or probe feed technique is used in the experiment.

The U shape slot in the radiating element tends to have wideband characteristics. It also suggests that a U shape slot introduces the capacitive component in the input impedance to counteract the inductive component of the probe. Also to compensate the increasing inductive effect due to the slots, thickness of the substrate is increased.

The antenna is made of a single patch on top, one layers of dielectric (air) and a vertical probe connected from ground to the upper patch.

From Figure 1, The main E shaped patch has Wa x La dimension while the outer patch has Wb x Lb dimension.

Fully Reused VLSI Architecture of FMO/Manchester Encoding Using Sols Techinque for DSRC Applications

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Abstract:

Dedicated Short vary Communication could be a simplex or duplex short vary to medium vary wireless communication. It's wont to support Intelligent Transport System (ITS) applications like electronic toll assortment, parking zone, border crossing identification etc. It proposes a VLSI design style victimization similarity-oriented logic simplification (SOLS) technique. The SOLS consists of 2 core methods: area-compact retiming and balance logical operation sharing. The area-compact retiming relocates the hardware resource to scale back five transistors. The balance logical operation sharing with efficiency uses miller encodings with the absolutely reused hardware design with SOLS technique, we tend to constructs a totally reused VLSI design of Manchester and FMO encodings for DSRC applications. The experiment results reveal that this style achieves associate in nursing economical performance compared with subtle works. To attain dc balance, enhancing signal dependability, FMO and Manchester codes are employed in DSRC standards. The performance of this VLSI design is evaluated on cadence-post layout simulation tool with a hundred and eighty nm CMOS technology. The Manchester codes consumes most operation frequency is 2GHz with one. 58 mW power consumption Associate in Nursing d 900 megacycle for FMO secret writing with power consumption. The DSRC standards with FMO and Manchester cryptography will support America, Europe, and Japan. This paper conjointly shown that space compaction of planned VLSI design compared to existing technique.

Keywords:

Manchester coding, Encoder, Decoder, NRZ, Moore's law, UART, clock frequency.

I. INTRODUCTION:

Manchester secret writing technique may be a digital secret writing technique during which all the bits of the binary knowledge square measure organized in an exceedingly explicit sequence. Here a touch '1' is delineated by transmitting a high voltage for [*fr1] period of the signal and for consecutive intermission period associate degree inverted signal are send. When transmitting '0' in Manchester format, for the first half cycle an occasional voltage can send, and for consecutive [*fr1] cycle a high voltage is send. The advantage of Manchester secret writing is that, once causation an information having continuous high signals or continuous low signal (e.g.:11110000), it's tough to calculate the quantity of one S and Os within the knowledge. as a result of there's no transition from low to high or high to low for a selected period (Here it's four x T, T is the time period for one pulse). The detection is feasible solely by shrewd the time period of the signal. However after we code this signal in Manchester format there will invariably be a transition from high to low or low to high for every bit. Therefore for a receiver it is easier to find the information in Manchester format and additionally the likelihood for incidence of an error is incredibly low in Manchester format and it is a universally accepted digital cryptography technique. The dedicated short vary communication may be a protocol for one or 2 manner medium vary communication.

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Abstract:

Dedicated Short vary Communication could be a simplex or duplex short vary to medium vary wireless communication. It's wont to support Intelligent Transport System (ITS) applications like electronic toll assortment, parking zone, border crossing identification etc. It proposes a VLSI design style victimization similarity-oriented logic simplification (SOLS) technique. The SOLS consists of 2 core methods: area-compact retiming and balance logical operation sharing. The area-compact retiming relocates the hardware resource to scale back five transistors. The balance logical operation sharing with efficiency uses miller encodings with the absolutely reused hardware design with SOLS technique, we tend to constructs a totally reused VLSI design of Manchester and FMO encodings for DSRC applications. The experiment results reveal that this style achieves associate in nursing economical performance compared with subtle works. To attain dc balance, enhancing signal dependability, FMO and Manchester codes are employed in DSRC standards. The performance of this VLSI design is evaluated on cadence-post layout simulation tool with a hundred and eighty nm CMOS technology. The Manchester codes consumes most operation frequency is 2GHz with one. 58 mW power consumption Associate in Nursing d 900 megacycle for FMO secret writing with power consumption. The DSRC standards with FMO and Manchester cryptography will support America, Europe, and Japan. This paper conjointly shown that space compaction of planned VLSI design compared to existing technique.

Keywords:

Manchester coding, Encoder, Decoder, NRZ, Moore's law, UART, clock frequency.

I. INTRODUCTION:

Manchester secret writing technique may be a digital secret writing technique during which all the bits of the binary knowledge square measure organized in an exceedingly explicit sequence. Here a touch '1' is delineated by transmitting a high voltage for [*fr1] period of the signal and for consecutive intermission period associate degree inverted signal are send. When transmitting '0' in Manchester format, for the first half cycle an occasional voltage can send, and for consecutive [*fr1] cycle a high voltage is send. The advantage of Manchester secret writing is that, once causation an information having continuous high signals or continuous low signal (e.g.:11110000), it's tough to calculate the quantity of one S and Os within the knowledge. as a result of there's no transition from low to high or high to low for a selected period (Here it's four x T, T is the time period for one pulse). The detection is feasible solely by shrewd the time period of the signal. However after we code this signal in Manchester format there will invariably be a transition from high to low or low to high for every bit. Therefore for a receiver it is easier to find the information in Manchester format and additionally the likelihood for incidence of an error is incredibly low in Manchester format and it is a universally accepted digital cryptography technique. The dedicated short vary communication may be a protocol for one or 2 manner medium vary communication.

The Energy Efficient Functional Unit for Fully Optimized DSP Accelerator Architecture Manipulating Carry-Save Arithmetic

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Abstract

DSP accelerators are hardware modules appended to a processor core remotely to improve the accomplishment and usefulness of computationally concentrated DSP functions. Area particular hardware designs shapes perfect speeding up as far as execution and force, yet their unbendable data ways lead to expanded silicon many-sided quality. In adaptable DSP accelerators agent functional computational unit (FCU) are joined to enhance execution, decrease energy consumption and to give adaptable data ways. The design misuses carry save (CS) number juggling to empower quick affixing of added substance and multiplicative operations. Be that as it may, the carry save enhancement approaches have constrained effect on data flow graph (DFG) overwhelmed by duplications. In any case, research exercises have demonstrated the math improvements at more noteworthy reflection levels contrasted with auxiliary circuit one significantly impact on the data way execution. CS representation keeps on being extensively usual to plan quick number juggling circuits as a result of its characteristic advantage of disposing of the huge convey proliferation chains. Hardware increasing speed keeps on being shown an extremely encouraging usage system for digital signal processing (DSP) space. Rather than receiving a solid application-particular incorporated circuit outline approach, inside this brief, we show a composition accelerators agent design made out of adaptable computational models that offer the execution of a major gathering of operation layouts present in DSP popcorn portions. It can likewise be utilized as a part of different picture processing applications.

Keywords: Carry-Save (CS), Datapath Synthesis, Flexible Accelerator, Digital Signal Processing (DSP), Hardware Acceleration.

I. Introduction

The consolidation of heterogeneity through specific hardware accelerators enhances execution and diminishes energy consumption. Advanced inserted frameworks target high-complete application space names requiring productive usage of computationally serious digital signal processing (DSP) functions. Numerous researchers have recommended utilizing area particular coarse-grained reconfigurable accelerators agents, to have the capacity to build ASICs' adaptability without significantly bargaining their execution [1]. Despite the fact that application-specific integrated circuits (ASICs) make up the perfect increasing speed arrangement with regards to execution and force, their firmness brings about lifted plastic many-sided quality, as different instantiated ASICs are important to quicken different popcorn pieces. Elite adaptable datapaths happen to be proposed to effectively outline or fastened methods

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3.3.2-17

The Cloud Computing Intellect with Auditing for Secured Data Storage

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Abstract: In Cloud Environment, utilizing cloud storage service, clients can remotely store their information and appreciate the on-interest top notch applications and services from a common pool of configurable figuring assets, without the weight of nearby information storage and support. Be that as it may, the way that clients no more have physical ownership of the outsourced information makes the information respectability security in cloud computing an imposing errand, particularly for clients with obliged processing assets. Also, clients ought to have the capacity to recently utilize the cloud storage as though it is nearby, without agonizing over the need to confirm its trustworthiness. Consequently,empowering open auditability for cloud storage is of basic significance with the goal that clients can fall back on an outsider examiner (TPA) to check the respectability of outsourced information and be effortless. To safely present a viable TPA, the auditing procedure ought to acquire no new vulnerabilities toward client information security, and acquaint no extra online weight with client. In this paper, we propose a safe cloud storage framework supporting security protecting open auditing. We facilitate extend our outcome to empower the TPA to perform reviews for numerous clients all the while and effectively. Broad security and execution investigation demonstrate the proposed plans are provably secure and very productive.

Keywords: Cloud Storage, Integrity, Privacy Preserving, Authenticator Regeneration, Proxy, Third Party Auditor.

I. INTRODUCTION
Cloud computing and storage permit clients are to get to and share assets offered by cloud service providers at a lower negligible expense. It is normal for clients to have cloud storage services to utilize information with others in a gathering as information sharing is one of a kind element in numerous cloud storage offerings. The respectability of information in cloud storage, subject to uncertainty and test, as information put away in the cloud can without much of a stretch be lost or undermined because of the inescapable equipment or programming of disappointments and human blunders. The conventional methodology for checking information rightness is to recover the whole information from the cloud and after that check information trustworthiness by checking the accuracy of the whole information. Cloud figuring makes numerous focal points more engaging than any other time in recent memory, it

additionally brings new and testing security dangers toward clients' outsourced information. Cloud service providers (CSP) are separate regulatory elements where the information outsourcing is really giving up client's definitive control over the destiny of their information. So in result, the rightness of the information in the cloud is being put at danger because of the accompanying reasons. Despite the fact that the foundations under the cloud are more intense and solid than individualized computing gadgets, still they are confronting the wide scope of both interior and outer dangers for information trustworthiness.

The blackouts and security breaks of vital cloud services are the best cases which show up every now and then .Second, there exist different inspirations for CSP to act unfaithfully toward the cloud clients with respect to their outsourced information status. CSP may recover capacity for money related reasons by disposing of information that have not been or are infrequently gotten to, or even shroud information misfortune occurrences to keep up a notoriety [8], [9], [10]. In short outsourcing information to the cloud is monetarily alluring for long haul extensive scale storage, it doesn't quickly offer any surety on information honesty and accessibility. On the off chance that this issue is not appropriately tended to it might block the achievement of cloud engineering [2], [4],[7],[12]. For overseeing effortlessly, it is attractive that cloud just engages confirmation demand from a solitary assigned gathering. When you store your photographs online rather than on your home PC, or use webmail or a long range interpersonal communication webpage, you are utilizing a "cloud figuring" service. On the off chance that you are an association, and you need to use, for instance, an internet invoicing service as opposed to upgrading the in house one you have been utilizing for a long time, that web invoicing service is a "cloud processing" service. Cloud figuring alludes to the conveyance of processing assets over the Internet. Rather than keeping information all alone hard drive or upgrading applications for your requirements, you utilize an service over the Internet, at another area, to store your data or utilize its applications.

Doing as such may offer ascent to certain protection Implications. The present accessibility of high-limit systems, minimal effort PCs and capacity gadgets and additionally the far reaching appropriation of equipment virtualization, service arranged engineering, and autonomic and utility

A Novel Information Facilitating Plan which Incorporates Two key Capacities in Cloud Merchants

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Abstract: More endeavors and associations are facilitating their information into the cloud, keeping in mind the end goal to lessen the IT support cost and improve the information dependability. Be that as it may, confronting the various cloud sellers and in addition their heterogeneous valuing approaches, clients may well be confounded with which cloud(s) are appropriate for putting away their information and what facilitating technique is less expensive. The general business as usual is that clients as a rule put their information into a solitary cloud and after that just trust to good fortune. In view of complete examination of different cutting edge cloud merchants, this paper proposes a novel information facilitating plan which incorporates two key capacities fancied. The first is selecting a few reasonable mists and a proper repetition system to store information with minimized fiscal cost and ensured accessibility. The second is setting off a move procedure to re-convey information as per the varieties of information get to example and valuing of mists. We assess the execution of CHARM utilizing both follow driven reproductions and model trials. The outcomes demonstrate that contrasted and the major existing plans; CHARM spares around 20% of money related cost as well as shows sound flexibility to information and value alterations.

Keywords: Charm, Cloud Vendors, Cheaper, Efficient, Suitable Cloud Data Hosting.

I. INTRODUCTION

Distributed storage administrations, for example, Drop box, CloudMe, and Seafile give clients a helpful and solid approach to store and share information from anyplace, on any gadget, and whenever. The clients' information put away in distributed storage are consequently synchronized over all the assigned gadgets associated with the cloud in an auspicious way. With variety of gadgets – particularly cell phones that clients have today, such anywhere, anytime highlights fundamental streamline information administration and consistency support, and along these lines give a perfect apparatus to information sharing and coordinated effort. In a couple short For instance, Cloud Me asserts that more than 200 million clients have put away more than 14 PB of information utilizing their administration, while Drop box has guaranteed more than 100 million clients who store or overhaul 1 billion records each day. In spite of the late section into this market, Seafile got 10 million clients just in its initial two months. The key operation of distributed storage administrations is information synchronization which naturally maps the adjustments in clients' neighborhood document frameworks to the cloud by means of a progression of system correspondences. The general information match up rule. In a distributed storage benefit, the client as a rule needs to dole out an assigned nearby organizer in which each document operation is seen and synchronized to the cloud by the customer programming created by the administration supplier.

Synchronizing a record includes an arrangement of information match up occasions, for example, exchanging the information file, information content, adjust notice, match up status/measurements, and match up affirmation. Normally, every information match up occasion causes organize activity. In this paper, this movement is eluded to as information synchronize activity. The Internet is progressively a stage for online administrations, for example, Web look, informal communities, and video gushingdisseminated over numerous areas for better dependability and execution. The pattern toward geologically different server arrangement will just proceed and progressively incorporate littler endeavors, with the achievement of distributed computing stages like Amazon AWS. These administrations all need a powerful approach to direct customers over the wide region to a fitting administration area. For some organizations offering appropriated administrations, overseeing imitation choice is a pointless weight. In this paper, display the plan, execution, assessment, and sending of DONAR, a decentralized copy choice framework that addresses the issues of these administrations. In the first place, in most information escalated administrations, a demand for a particular information thing must be fulfilled by a duplicate of that specific information thing, so not each server can deal with each demand, which entangles stack adjusting. Second, intelligence implies that a fruitful application must give profoundly responsive, low-inactivity administration to most by far of clients: a common Service Level Objective.

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STORE ATTRIBUTES AND CUSTOMER SATISFACTION IN ORGANIZED RETAILING WITH REFERENCE TO SELECTED MALLS IN VISAKHAPATNAM

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Article Info	ABSTRACT

Keyword:

organized retailing,

store attributes,

customer

satisfaction

India is one of the fastest growing economies in the world and is witnessing rapid changes in all activities including retail industry with one of the highest growth rates. The Indian retail market, the fifth largest retail destination globally, has been ranked as the most attractive emerging market for investment in the retail sector by AT Kearney's latest annual Global Retail Development Index (GRDI). The retail industry in India is of late hailed as one of the sunrise sectors in the economy. It is the largest component of the services sector with the contribution of 14 to 15 per cent to the national Gross Domestic Product (GDP) and employing 7 per cent of the total workforce (21 million people) in the country, the retail industry is definitely one of the pillars of the Indian economy. The McKinsey report

3.3.2 - 20

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Keyword: organized retailing, store attributes, customer satisfaction	India is one of the fastest growing economies in the world and is witnessing rapid changes in all activities including retail industry with one of the highest growth rates. The Indian retail market, the fifth largest retail destination globally, has been ranked as the most attractive emerging market for investment in the retail sector by AT Kearney's latest annual Global Retail Development Index (GRDI). The retail industry in India is of late hailed as one of the sunrise sectors in the economy. It is the largest component of the services sector with the contribution of 14 to 15 per cent to the national Gross Domestic Product (GDP) and employing 7 per cent of the total workforce (21 million people) in the country, the retail industry is definitely one of the pillars of the Indian economy. The McKinsey report

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WATERSHED PRESERVATION AND CONTROL USING GIS

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Dr. N. Victor Babu[**]
CH.Ramesh Naidu[***]
Murali Krishna Gurram[****]

Abstract

Remote sensing (RS) and Geographical Information System (GIS) data provides timely, accurate and reliable information at definite intervals in a cost effective manner and these tools are helpful in mapping and monitoring of natural resources available for proper utilization. The Meghadrigedda watershed is selected for the present study and has a gross capacity of 1169 Mc. Ft. For the identification of morphological features and analyzing their properties of the Meghadrigedda basin various GIS and image processing techniques have been adopted. The linear and aerial aspects of the basin were calculated and computed. It is 7th order drainage basin and drainage pattern is dendritic type. The results obtained from watershed delineation and prioritization has wider application in preservation of the watershed.

Keywords:

GIS;
Watershed;
Delineation;
Drainage Parameters,
Preservation.

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1.Introduction

Basin morphometry is the mathematical quantification of various drainage basin characteristics. Land is one of the important natural resource and it should be conserved to mitigate the increasing demand of land and water resources (Panhalkar S.S et al, 2012). In India 70% of the people depend on agriculture directly or indirectly. The analysis of the drainage basin is important in assessing the ground water potential and ground water management. The study on morphometric analysis using remote sensing and GIS techniques was carried out by (Sangita Mishra et al, (2010); Biswas et al, 1999; Panhalkar S.S et al, 2012; Subodh Chandra Pal and Gopal Chandra Debnath, 2012; Jagadeeswara Rao, Harikrishna P and Suryaprakasa Rao.B, 2006).

The Meghadrigedda watershed is the area enclosed between Northern latitude and Eastern longitude, covering an area of 453.40 sq. km falling in Survey of India (SOI) toposheet Nos: 65 O/1, O/2&O/3, O/5 and O/6 on 1:50,000 scale. Meghadrigedda reservoir was formed across Meghadrigedda and Naravagedda just 400 mts above their confluence to supply drinking water to the people of Visakhapatnam city at the rate of 8Million gallons per day. The 8MGD of water is being drawn from the reservoir and distributed to various industries and industrial colonies by Visakhapatnam Municipal Corporation.

Meghadrigedda reservoir has a gross capacity of 1169 Mc.Ft and the flood bank was formed on the left side of the reservoir to protect the Howrah-Visakhapatnam railway line and the Chintalagraharam village. The average annual rainfall is around 110cm and occurs in the months of June to November. December and January are coldest months in this region and April and May are hottest months. The area enjoys sub tropical climate and the temperature ranges from 14 to 22° C in December and 33-45°C in May. Relative humidity is high in day time and varies between 70-80% throughout the year.

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Experimental investigation on partial replacement of Cement with GGBFS and Sand with Bottom Ash in concrete

Dr.N.Victor Babu[*]
B.V.Ramanamurthy[**]
Neeli.Harikrishna[***]

Abstract

Nowadays Cement is major constituent material in construction industry and Lime and Silica producesthe Cement.Without these natural materials production of cement is very tedious task.Moreover the emission of Carbondioxide(CO_2) is more in the production of Cement.It causes environmental pollution globally.Sand is also naturally available material ,it gives good strength to the concrete.But environmental degradation happened by scarcity of natural sand.The main motto of this work is to find alternate materials for partial replacement of Cement and sand in concrete to obtain required strength as well as to minimize degradation of natural materials.In this work Cement is partially replaced by Ground GranulatedBlast Furnace slag(GGBFS) and sand is Bottom Ash(BA) to achieve required compressive strength.By this Investigation,replacement of 10% Cement and 10% sand in concrete with and without adding of admixture gave sufficient characterstic compressive strength of concrete for 28 days curing period.

Key words

Charactersticcompressive strength

GroundGranulatedBlast Furnace slag(GGBFS)

Bottom Ash(BA)

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1. Introduction

Concrete is made by the mix of ingredients like cement, both fine and coarse aggregate and water. In ever construction concrete plays a vital role to give good strength and a perfect shape of any structure. Concrete's durability and relatively low cost make it famous worldwide. Manufacturing of one ton of Portland cement requires querying 1.5 tons of Limestone and Clay (Civil and Marine, 2007).Continues excavation of sand and extraction of natural rock strata and other ores causes an imbalance of geological phenomena, it may lead to manual disaster. So researchers and manufacturing industries are trying to find out alternative replacement materials for manufacturing of concrete.GGBFS is one of the industry waste produced by steel plants. The main components of GGBFS are Cao, Sio2, Al2O3 and Mgo.These contents lead to good compressive strength in concrete with limited percentage replacement of cement in that.From previous studies it was proved that GGBFS replacement enhances lower heat of hydration, higher durability and higher resistance to sulphate and chloride attack when compared with normal ordinary concrete. Bottom Ash is also

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USE OF RECYCLED MATERIALS IN CONCRETE CONSTRUCTION

Mr.Nanubilli Ramu*
Dr.N.Victor Babu**

Abstract

Use of recycled aggregate in concrete can be useful for environmental protection. Recycledaggregates are the materials for the future. The application of recycled aggregate has been started in a large number of construction projects of many European, American, Russian and Asian countries.This paper reports the basic properties of recycled fine aggregate & also compares these properties with natural aggregates. Similarly the properties of recycled aggregate concrete are also determined. Basic concrete properties like compressive strength,split tensile strength, flexural strength and workability etc. are explained here for different combinations of recycled aggregate with natural aggregate. The concrete mixes were designed using IS 10262-2009 .fine aggregate is partially replaced with 10%,20%,30% and cement is partially replaced with silicafume of 0%,10%and 15% respectively.

Keywords:

Rubber agrregate;
Normal aggregate;
Cement;
Silica fume.

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1. Introduction

Waste materials are common problems in modern living. Waste accumulates from a number of sources including domestic, industrial, commercial and construction. These waste materials have to be eventually disposed of in ways that do not endanger human health. In light of this, waste minimization is increasingly seen as an ecologicallysustainable strategy for alleviating the need for the disposal of wastematerials,which is often costly, time and space consuming, and can also have significant detrimental impacts on the natural environment.The use of recycled materials is often cheaper for the consumers of the end product. Hence, there is also an economic justification for promoting its use.

The use of recycled materials generated from transportation, industrial, municipal and mining processes in

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A comparative study on compressive strength of cement mortar cubes with fly ash and GGBS produced using different fine aggregates

BugathaAdilakshmi[1]
Dr N.VictorBabu[2]

Abstract

River sand is the most commonly used Fine Aggregate for construction throughout India. Excessive use of river sand leads to lowering of ground water table, sand degradation and also threat to bridges, river banks and nearby structures and in the same way Cement is a major constituent material of the concrete which produced by natural raw material like lime and silica. Ordinary Portland cement is one of the main ingredients used for the production of cement mortar. But, the production of each tonne of cement involves emission of large amounts of carbon-dioxide gas into the atmosphere, a major contributor for greenhouse effect and global warming. To overcome the above backdrops, we have to go for alternatives for satisfying the requirements. The Research focused on comparing the compressive strength of cement mortar cubes produced using fine aggregates from different sources. This project involves, preparation of cement mortar cubes of CM(1:2) proportion and also cement is replaced with 25% of Fly ash and 50% of GGBS for different grades of cement (33,43 and 53) at Constant water cement ratio and tested to determine the compressive strength of cement mortar cubes for 7, 14, 28 and 54 days under normal curing conditions. Finally, preparation of graphs from obtained results for comparative analysis.

Keywords:

Fine aggregates, River sand;
Ennore sand; Stone dust;
Quartz dust,
Compressivestrength; Cement
mortar

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An experimental study on Self Compacting Concrete using Polypropylene fibre

Aripaka Venkateshu[*]
Dr. N.Victor babu[**]
Kodali Roopesh[***]
Ch.Divyaphani[****]

Abstract

Self compacting concrete (SCC) is the concrete that is able to flow under that is able to flow in the interior of the form work, filling it in a natural manner and passing through the reinforcing bars and other obstacles ,flowing and consolidating under the action of its own weight .These properties enable the SCC to be an excellent material for constructions with complicated shapes and congested reinforcement .One of the main advantages in using SCC is the minimization of skilled labour needed for placing and finishing the concrete. All these benefits decrease the costs and reduce the time of the building process over constructions made from traditionally vibrated concrete. However, hardened self compacting concrete is still as brittle as normal concrete and has a poor resistance to crack growth. To improve the post –peak parameters of SCC ,polypropylene (Recron fibers) are added.

As self compacting concrete offers several economic and technical and benefits the use of polypropylene, polyester and glass fibers extends its possibilities .Polypropylene fibers bridge cracks ,retard their propagation and improve several characteristics and properties of the SCC .The purpose of thesis is to investigate the effects of weight fraction of polypropylene on the compressive strength, split tensile strength and modulus of elasticity of polypropylene fibers reinforced self compacting concrete .For this purpose, Recronfibers where used .Four different fiber volumes were added to concrete mixes at 0.1,0.2 and 0.3 percent by weight of cement .Four different mixes were prepared .After 28 days of curing ,compressive strength ,split tensile strength and modulus of elasticity were determined. It was found that, inclusion of polypropylene fibers significantly affects the compressive strength, split tensile strength and modulus of elasticity of self-compacting concrete.

Keywords:

Self compacting concrete:
Polypropylene:
Compressive strength:
Split tensile strength;
Modulus of elasticity.

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Capital Structure Performance of Steel Authority of India Limited and Tata Steel Limited: By Testing Trade-off and Pecking Order Theories

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ABSTRACT

Capital structure is key discipline of financial operations of steel industry. This researcher constitutes an attempt to identify the impact of Capital Structure Performance of two leading and rank one public and private sector steel companies. The analysis was done with the Capital Structure and its importance on financial performance of select two steel producing companies during year 2014-15 to 2018-19 (Five years) of Steel Authority of India Limited and Tata Steel Limited. The idea of this paper is to examine the extent to which growth determines of Capital Structure performance of these two companies by testing of Trade-off and Pecking Order Theories. This is done by examining the Capital Structure components consisting of long-term debt with Capital Structure determinants of SAIL and TSL and then testing the resulting ideas empirically. This paper may provide useful insights for the interested stakeholders, such as customers, depositors, borrowers and investors etc.

Keywords: Capital Structure, Long term debt, stakeholders, Trade-ff Theory, Pecking Order Theory.

1. INTRODUCTION

Capital structure refers to the mix of long-term sources of funds such as debentures, long term debt, preference shares capital and equity share capital including Reserves and surpluses (i.e. retained earnings). Every time the firm makes an investment decision, it also makes financial decision at the same time. The investment projects of a company can be financed either by increasing the owners claims or the creditors' claims. The owners' claims increase when the firm raises funds by issuing common shares or by retaining the earning; the creditor's claims increase by borrowings.

The financing or capital structure decision is a significant managerial decision. It influences the shareholders return and risk. Consequently, the market value of the share may be affected by the capital structure decision. The company will have to plan its capital structure initially at the time of its promotion. The decision will involve a Statement of the existing capital structure and factors which will govern the decision like present shareholders equity position strengthen by retention of earnings. Thus, the dividend decision also has a bearing on the capital structure decision of the company.

2. THEORETICAL MODEL OF THE DETERMINANTS OF CAPITAL STRUCTURE

The present paper attempts to explain the determination of variables in the capital structure of Steel Authority of India (SAIL) and Tata Steel Company (TSL). Due to global competition steel companies are now giving more emphasis on research and development activities and use advanced technology. This has important implications for managerial decision making. This study has tried to understand the role of knowledge capital and determinant factors in capital structure decision of SAIL and TSL. The following are the theoretical standpoints, a number of empirical studies have identified firm-level characteristics that affect the capital structure of companies. For examining the various factors that affect the capital structure of the SAIL and TSL, the present study considers testing of Trade-off and Pecking Order Theories and the following nine factors have been taken as independent variables in the present study. These factors are sales size, growth, profitability, interest coverage ratio, tangibility, NDT, assets size, income variability and liquidity.

Design of Boost Converter-Inverter with PWAM for Hybrid Vehicle using fuzzy logic controller

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Abstract: This paper presents control technique "PWAM" strategy for HEV/EV engine drive framework. This modulation method is quite different from other PWM methods that have been well researched or commonly used for the inverter in HEV/EV system. By using this method, only one phase leg of the inverter is doing switching action for every PWM-carrier period. The proposed coordinated circuit permits the machine to work in engine mode or goes about as support inductors of the help converter, and along these lines boosting the yield torque coupled to the same transmission framework or dc-link voltage of the inverter associated with the output of the incorporated circuit. In motor mode, the proposed integrated circuit acts as an inverter and it becomes a boost-type boost converter, while using the motor windings as the boost inductors to boost the converter output voltage. A simple fuzzy logic control is built up by a group of rules based on the human knowledge of system behavior .Modeling, analysis, and control of distributed power sources and energy storage devices with MATLAB/ Simulink.

I.INTRODUCTION

In today's HEVs and EVs, fast engines are utilized. It utilizes a boost converter and inverter framework. The DC to DC transformation innovation has been growing quickly. They are thought to be the most worthwhile supply apparatuses for encouraging electronic frameworks in examination with straight power supplies which are basic and have ease [1] - [2]. Subsequently, DC to DC converters have been generally utilized as a part of mechanical applications, for example, dc engine drives, PC frameworks and correspondence types of gear. DC to DC converters are non-direct in nature. The configuration of elite control for them is a test for both the control designing architects and force hardware engineers. As a rule, a great control for dc–dc converters dependably

guarantees dependability in self-assertive working condition.Moreover, good response in terms of rejection of load variations, input voltage changes and even parameter uncertainties is also required for a typical control scheme. The boost type DC to DC converters are used in applications where the required output voltage is higher than the source voltage.

To turn on and the inverter switches PWM procedure is utilized. Beat width/pulse width adjustment (PWM) is the premise for control in force gadgets. The hypothetically zero ascent and fall time of a perfect PWM waveform speaks to a favored method for driving advanced semiconductor power gadgets. Except for some resonant converters, by far most of force electronic circuits are controlled by PWM signs of different structures. The quick rising and falling edges guarantee that the semiconductor power gadgets are turned on or off as quick as for all intents and purposes conceivable to minimize the exchanging move time and the related exchanging misfortunes. For DC–DC converters, the PWM reference is a consistent when the converter works in an enduring state yet fluctuates at whatever point the converter experiences a transient. Though inverter utilized this framework utilizes one and only stage leg and it is doing PWM exchanging while the other two stages are clipped to the dc rails. In this way, the inverter aggregate exchanging time is decreased to 1/third that of the ordinary SPWM technique and the aggregate exchanging misfortune can be diminished to 1/third to 1/9rd. Additionally, the inverter dc-join requires much littler capacitance when PWAM strategy is connected, which makes the framework more smaller and lighter.

The conventional control method .used, such as simple voltage feedback control cannot satisfy the requirement any longer, thus a fast closed-loop control method is necessary. To reduce the drawback with the previous concept multi loop feedback linearized control strategy is introduced

High PF and Low THD Buck-Boost Power Driver for Led Lamps using PI Controller

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Abstract— An integrated double buck-boost converter circuit, which can act as a high power factor, low output current ripple, and good efficiency driver for power LED lamps. The input stage is based on the integration of buck boost converter which performs power factor correction (PFC) from a universal ac source, using the PWM operation mode as a control loop. The integrated double buck-boost (IDBB) converter features one controlled switch and two inductors that supply a solid-state lamp from the mains, providing high power factor and good efficiency. In this project, the IDBB converter is analyzed with and without Control algorithm (PI controller), and a design methodology is proposed using Matlab. It is demonstrated that, with a careful design of the converter, the filter capacitances can be made small enough so that film capacitors may be used. The results obtained using PI controller and fuzzy logic controller for the same circuit are compared and are presented which validates high input power factor and superior control over the output voltage.

Key words: IDBB Converter, PI Controller, Thermal Harmonic Distortion (THD), Power LED, High Power Factor (HPF)

I. INTRODUCTION

WHITE POWER LEDs are becoming an attractive light source, owing to their high reliability, long life, high color rendering index, and small size. In addition, there are commercially available units that can reach light efficiencies as high as 100 mW. All these features make white LEDs a good option to override fluorescent and other discharge lamps in many applications, including street lighting, automotive lighting, decorative applications, and household appliances. However, power LEDs suffers from several drawbacks. First, due to their nearly constant-voltage behavior, they cannot be supplied from the dc or ac input voltage directly. Therefore, some kind of current-limiting device must be used, similarly to the ballast used to limit the current through a discharge lamp. On the other hand, the high efficiency of power LEDs is only maintained under strict operating conditions, which include low direct current and low junction temperature. All these mean that the development of power supplies that achieve correct driving of the LED-based lamp is an important topic of research.

Energy prices have skyrocketed in recent years owing to depleting renewable resources. In addition to seeking other energy sources, countries worldwide are also initiating energy-saving and carbon reduction programs. Due to the small size and high efficiency, semiconductor lighting has attracted researchers and manufacturers to develop new products using this technology. Nowadays the energy-inefficient incandescent lamps and mercury-based tubular and compact fluorescent lamps are replacing LED lamps. Although HB white LEDs are not the most efficient lighting systems in terms of lumens per watt for streetlight applications (indeed, they achieve a lower efficiency than low-pressure sodium vapor lamps), they are quite interesting compared to traditional solutions due to their longer operating life and their more pleasant light spectrum (sodium lights emit only in yellow color, thus providing a very poor Color Rendering Index, CRI). High Brightness-LEDs do not need neither warm up nor restart period, which do imply the use of specific circuitry. Due to the high efficiency of the LEDs with maximum illumination, the utilization is 85%-90% of the input power into light energy, whereas the fluorescent lamps will produce only 77%. On the other hand global warming and increasing power demand etc. may be fulfilled by LEDs by implementing enhanced control technique (light dimming and preheating of filaments if possible). The recombination of electrons and holes can cause either photons (light) or phonons (heat). So the junction temperature of the LEDs increasing leads to the degradation of the luminous flux of LEDs .The high efficacy of power LEDs is only maintained under strict operating conditions, which include low direct current and low junction temperature (Fig 1).

All these mean that the development of power supplies that achieve correct driving of the LED-based lamp is an important topic of research. White power LEDs are becoming an attractive light source, owing to their high reliability, long life, high color rendering index, and small size. In addition, there are commercially available units that can reach light efficacies as high as 100 lm/W. All these features make white LEDs a good candidate to override fluorescent and other discharge lamps. The main drawback of these LEDs is they need constant voltage as input and they need current limiter before the input of the LED. Therefore, some kind of current-limiting device must be used, similarly to the ballast used to limit the current through a discharge lamp. On the other hand, the high efficacy of power LEDs is only maintained under strict operating conditions, which include low direct current and low junction temperature.

This drive is currently implemented with power electronic stages based on switch mode power supplies (SMPS). However, an electrolytic capacitor is required in these applications. Unfortunately, the operating life of such capacitors is by far shorter than the life of the HB LEDs, and usually are the shortest of all the devices in the power supply. Thus, removing the electrolytic capacitor would imply a remarkable increase in the operating life and reliability of the system. PFC converters can be classified into two types: two-stage and single-stage. Two-stage PFC converters consist of a PFC stage and a dc/dc stage. Single-stage PFC converters integrate the PFC stage and the dc/dc stage, leading to simple topology and low cost. They are suitable for low-power applications. The simplest active PFC circuits are implemented with a single-stage that makes the power factor correction. The most common single-stage topology used is the fly back converter working in

Three-phase Transformerless Grid connected PV Inverter

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Abstract: PV systems are now more affordable due to government incentives, advancement of power electronics and semiconductor technology and cost reduction in PV modules. In the past, various transformers less PV inverter topologies have been introduced, with leakage current minimized by the means of galvanic isolation and common-mode voltage (CMV) clamping. Leakage current minimization is one of the most important considerations in transformer less photovoltaic (PV) inverters. The galvanic isolation can be achieved via dc-decoupling or ac-decoupling, for isolation on the dc- or ac-side of the inverter, respectively. It has been shown that the latter provides lower losses due to the reduced switch count in conduction path. Common-mode voltage (CMV) appears in Three-phase due to working principles of the pulse width modulation (PWM) inverters. This voltage is the main source of many unwanted problems systems. In this Project, several recently proposed transformer less PV inverters with different galvanic isolation methods and CMV clamping technique are analyzed and compared. A simple modified H-bridge zero-voltage state rectifier is also proposed, to combine the benefits of the low-loss ac-decoupling method and the complete leakage current elimination of the CMV clamping method. The performances of different topologies, in terms of CMV, leakage current, total harmonic distortion, losses and efficiencies are compared. A safety issue is the main concern for the transformer less PV systems due to high leakage current. Without galvanic isolation, a direct path can be formed for the leakage current to flow from the PV to the grid The proposed concept can be implemented to PV inverter with Three-phase by using MATLAB/SIMULATION software.

Keywords: *Common Mode Voltage,Leakage Current*photovoltaic (PV) system.

I. INTRODUCTION

Today, the energy demand is increasing due to the rapid increase of the human population and fast-growing industries. Hence, renewable energy plays an important role to replace traditional natural resources such as fuel and coal. Photovoltaic (PV) energy has recently become a common interest of research because it is free, green, and inexhaustible [1]–[3]. Furthermore, PV systems are now more affordable due to government incentives, advancement of power electronics and semiconductor technology and cost reduction in PV modules [2], [3].

Generally, there are two types of grid-connected PV systems, i.e., those with transformer and without transformer. The transformer used can be high frequency (HF) transformer on the dc side or low frequency transformer on the ac side [4]. Besides stepping up the voltage, it plays an important role in safety purpose by providing galvanic isolation, and thus eliminating leakage current and avoiding dc current injection into the grid. Nevertheless, the transformers are bulky, heavy, and expensive. Even though significant size and weight reduction can be achieved with HF transformer, the use of transformer still reduces the efficiency of the entire PV system [9]. Hence, transformers less PV systems are introduced to overcome these issues. They are smaller, lighter, lower in cost, and highly efficient [4]. However, safety issue is the main concern for the transformerless PV systems due to high leakage current. Without galvanic isolation, a direct path can be formed for the leakage current to flow from the PV to the grid. At the same time, the fluctuating potential, also known as common-mode voltage (CMV), charges and discharges the stray capacitance which generates high leakage current. Besides safety issue, this leakage current increases grid current ripples, system losses, and electromagnetic interference. In order to reduce the leakage current to meet the standard in , conventional half bridge inverter or full-bridge inverter with bipolar modulation technique are used in transformerless PV systems to generate constant CMV to reduce the leakage current. However, a 700-V dc-link voltage is required for the half bridge and diode-clamped topologies. For full-bridge bipolar modulation, high losses and reduced efficiency are observed due to two-level bipolar output voltage. As a result, the voltage stress across the inductors is doubled and current ripples increase. Larger

Fuzzy Based SFCL for Limiting Fault Current in Distribution Generation

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Abstract: In the modern power system, as the utilization of electric power is very wide, and it is very easy for occurring any fault or disturbance, which causes a high short circuit current flows. More over the increase in the power generation results in an increase in the system fault current levels. The high current due to this fault large mechanical forces and these forces causes overheating of the equipment. If the large size equipment are used in power system then they need a large protection scheme from severe fault conditions. Generally, the maintaince of electrical power system relibility is more important. But the elimination of fault is not possible in power systems, so, the only alternate solution is to reduce the fault current levels. For this a fuzzy based Super Conducting Fault Current Limiter is the best electric equipment which is used for reducing the severe fault current levels. In this paper, we simulated the unsymmetrical faults with fuzzy based superconducting fault current limiter. In our analysis we had the following conclusions.

Keywords: Biometrics Hiding, Steganography System, Remote Authentication, Biometrics, Video Object.

I. INTRODUCTION

Voltage sag is one of the most common power quality disturbances in electric networks. It is necessary to investigate voltage sag due to consumers' vulnerability [1-10]. Faults are the main cause of voltage sags in distribution networks. Fault in distribution networks according to its specifications (its location, duration and time) can cause an interruption or a voltage sag at the nodes of the network. By making random faults, the voltage sag in such networks can be investigated. The proposed structure prevents voltage sag and phase-angle jump of the substation PCC after fault occurrence. This structure has a simple control method. Using the semiconductor switch (insulated-gate bipolar transistor or gate turnoff thyristor at dc current rout leads to fast operation of the proposed FCL and, consequently, dc reactor value is reduced. On the other hand, the proposed structure reduces the total harmonic distortion on load voltage and it has low ac losses in normal operation. As a result, other feeders, which are connected to the substation PCC, will have good power quality. Today, power quality problem is one of the important issues in power systems. One of the most significant issues regarding power quality is voltage sag. Voltage sags are incidents that reduce the voltage amplitude for a short time. Creating problems for a wide range of equipment is the main cause to study voltage sags. Voltage sags can be harmful for some equipment such as drives or computers and cause significant financial damages. To study voltage sag the following points should be considered. Firstly, voltage sags are disturbances that arise by faults (short-circuit), energizing power transformers, starting electrical motors and sudden changes of loads

All these cases are classified as disturbances with low or moderate frequency [11-17]. Secondly, faults are the main cause of voltage sag in distribution networks. Thirdly, variable loads with time are different. Therefore voltage sag effects depend on what occurs and the difference between the loads [18-21]. However, because of high technology and cost of superconductors, these devices are not commercially available. Therefore, by replacing the superconducting coil with a non superconducting one in the FCL, it is possible to make it simpler and much cheaper. It is important to note that the main drawback of the non superconductor is a power loss which is negligible in comparison with the total power, provided by the distribution feeder. The other structures which are introduced have two numbers of thyristor switches in the ac branch of the diode bridge. When the fault occurs, after fault detection, the thyristor switch turns off at first zero crossing and the fault current is limited to an acceptable value. These structures have switching power loss and a complicated control circuit because of thyristor switching in the normal operation. In addition, we know that thyristor operation delay (turn off at first zero crossing) causes interruptions on structure performance. So, to limit the fault current between the fault occurrence instant and thyristors turn off instant, a large reactor in the dc route is used. Due to voltage drop, harmonic distortion, and power losses, this large value of dc reactor is unfavorable.

II. VOLTAGE SAG DISTRIBUTIONS CAUSED BY POWER SYSTEM FAULTS

According to IEEE standard 1159-1995, a voltage sag is defined as a decrease to between 0.1 and 0.9 p.u. in root mean square (rms) voltage at the power frequency for

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Design and Simulation of Step-Up DC–DC Converter Fed PMSM Drive

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Abstract: This paper presents a scheme for implementing two different DC/DC converters in the commutation circuitry of PMSM drive and corresponding output characteristic in both sensored and sensor less drive. Here we have considered Boost converters in order to provide a regulated supply to the commutation circuitry. The drive circuit is a closed loop system with a PI controller, Six-Switch Voltage Source Inverter (VSI) and one of the DC/DC converters among Boost. The large value of the inductor can be replaced using suitable Boost converter. In this paper a basic structure of a DC boost converter are proposed in simulation to provide the nominal power to PMSM drive from a fixed DC source and to control the speed of the system. The effectiveness of proposed system is validated by simulation results.

Keywords: Coupled-Inductor Converters, Dc/Dc Converters, High Voltage Gain Converters And Isolated, PMSM Drive.

I. INTRODUCTION

PMSM Drive is widely used for many low and medium power applications like fans, refrigerators, air conditioners due to its advantage of high efficiency, high torque/inertia ratio, low maintenance and wide range of speed control [1, 2]. A drive system normally consists of a power circuit, a drive and a control unit. For a PMSM drive the power circuit consists of a Diode Bridge Rectifier, a DC-DC converter and a VSI. A conventional PMSM drive fed by a Diode bridge rectifier results in THD of supply current of the order 60% which results in poor PF. As per IEC 61000-3-2 standard high power factor and improved power quality at the supply end is recommended [3]. DC/DC converters are nonlinear and time invariant system. Mechanisms to control the output of these converters are discussed in. DC-DC converters are type of electronic devices which is used when we want to change DC electrical power efficiently from one voltage level to another level. In DC-DC converters the impedance level of input energy is changed from one level to another. The DC/DC converter mainly used in a system where we require a regulated voltage supply to our circuit. The converter controls the dc link voltage using capacitive energy transfer which results in non pulsating input and output currents [4]. PMSM drives do not show any "slip" that is normally occurs in induction drives. PMSM drives are available in single-phase, 2-phase and 3-phase configuration.

The stator has the same number of windings corresponding to its phase. Out of these, 3-phase drives are the mostly used. There are various control techniques for PMSM drive among them two methods are widely used viz. sensor control and sensor less control [5]. In sensor control technique, mechanical position sensors like hall sensors, resolver etc. is used to detect the rotor position of PMSM Drive While in sensor less control technique, rotor position is detected by using the back EMF of the drive. The voltage source inverter (VSI) is made of power semiconductor switches, which is used for commutation and also for controlling the drive terminal voltage [6, 7]. The rotor speed is directly proportional to the terminal voltage of the drive. To control the speed, a closed loop control is used with PI controller using which we compare the actual speed and reference speed, and the error signal produced by this method is used to drive [8]. Hence these converters experience high switching losses, reduced reliability, electromagnetic interference and acoustic noise. Other significant drawback of the switch mode operation is the EMI produced due to large di/dt and dv/dt caused by a switch-mode operation. These shortcomings of switch-mode converters are overcome by increasing the switching frequency in order to reduce the converter size and weight and hence to increase the power density [10].
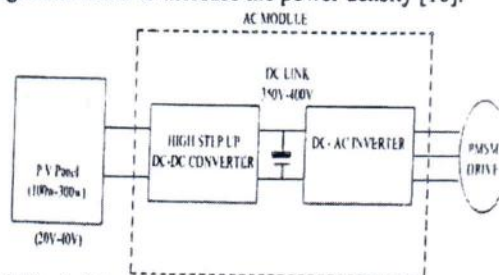

Fig.1.Block Diagram of Drive Connected AC Module.

Therefore, to realize high switching frequency in a converter changes its status (from on to off), when the voltage across it and/or the current through it is zero at the switching instant. DC-DC converters are nonlinear systems due to their inherent switching operation [11] as shown in Fig.1. To assure a constant output voltage, a classical linear design of a

Fuzzy Logic Controlled Based STATCOM to Compensate Loads for SEIG System

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Abstract: This project presents an analysis of the three-phase self excited induction generator (SEIG) with static compensator (STATCOM) as a voltage regulator. Current controlled voltage source inverter (CC-VSI) is used as STATCOM, which provides fast dynamic response to maintain constant voltage at SEIG terminals during severe load perturbations and acts as a source and sink of reactive power. The performance equations are derived sing d-q variable in stationary reference frame to develop a mathematical model of SEIG-STATCOM system feeding unbalanced loads. Transient analysis of the SEIGSTATCOM system is carried out for voltage build-up; switching in STATCOM, application and removal of balanced/unbalanced resistive/reactive loads. The STATCOM regulates the SEIG terminal voltage through reactive power compensation and also suppresses the harmonics injected by consumer loads. A single-phase synchronous D-Q frame theory-based control algorithm is used to generate gating pulses to the three-phase STATCOM. In extension PI controller is replaced with fuzzy logic controller to improve the performance of the system. The harmonic content in the source current is reduced by using Fuzzy controller By using MATLAB/SIMULINK software.

Keywords: Self-Excited Induction Generator (SEIG), Single Phase Synchronous D-Q Frame Theory, Static Synchronous Compensator (STATCOM).

I. INTRODUCTION

In remote areas, plenty of non-conventional energy sources are available. These non-conventional energy sources are identified as potential prime movers for the generating systems. Externally driven induction machine operates as a self-excited induction generator (SEIG) with its excitation requirements being met by a capacitor bank connected across its terminals. The SEIG has advantages like simplicity, maintenance free, absence of DC, brushless etc. as compared to the conventional synchronous generator. A considerable reported literature exists on steady state and transient analysis of SEIG under balanced/unbalanced resistive, reactive and motor loads. In d-q axes modeling is reported for the transient analysis of SEIG. Wang and Deng have presented the transient performance of the SEIG under unbalanced excitation system. Jain have given a generalized model for the transient analysis of SEIG under symmetrical and unsymmetrical conditions. A major disadvantage of SEIG is its poor voltage regulation requires a variable capacitance bank to maintain constant terminal voltage under varying loads. Attempts have been made to maintain constant terminal voltage by fixed capacitor and thyristor controlled inductor (SVC)], saturable-core reactor and short-shunt connection, However, voltage regulation provided by these schemes is of discrete type and inject harmonics in the generating system. By the invention of solid-state self-commutating devices, it is possible to make a static, noiseless

voltage regulator, which can provide continuously variable reactive power to the SEIG with varying load to keep terminal voltage constant.
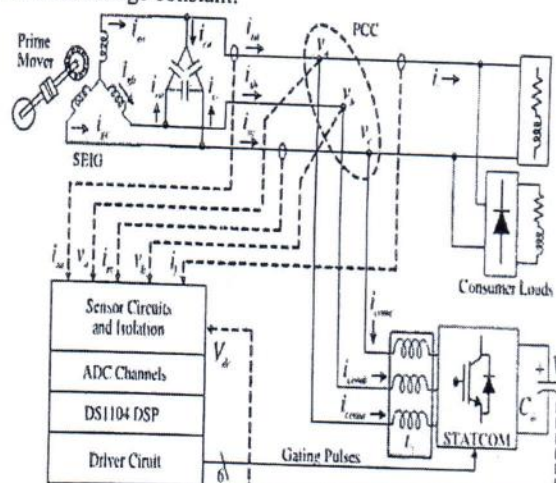

Fig.1. Schematic diagram of the SEIG–STATCOM system feeding single-phase loads.

This system called STATCOM has specific benefits compared to SVC, Schauder and Mehta have derived governing equations of STATCOM to determine the response of the STATCOM. The other suggested controllers in