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List of published papers in national/ international conference proceedings during the year 2017

Advanced seven level transformer-less multilevel inverter topology for PV application

Publisher: IEEE

N. Rajanand Patnaik ; Y. Ravindranath Tagore ; S. Chaitanya All Authors

Abstract: In the present trend the Renewable Energy Sources (RES) are the main alternative concept to develop the power generation and it is cheap compared to other sources. The RE... **View more**

Metadata

Abstract:

In the present trend the Renewable Energy Sources (RES) are the main alternative concept to develop the power generation and it is cheap compared to other sources. The RES (Renewable Energy Sources) like solar energy, wind energy, geothermal energy, biomass, tidal power etc., and here among all these sources of energy solar module is developed with two individual boosts converters are utilized to step-up the voltage with Maximum Power Point P&O (Perturb & Observe) technique. The fundamental concentration of this paper is to present the advanced multilevel competitive inverter topology with reduction in device count is the main merit of this topology which is called Packed U Cell (PUC). The main issue of previously designed multilevel inverter topologies is bulk in complex structures; hence it affects the overall system in terms of cost. Due to the excellent characteristics of Packed U Cell topology there is no need of filter requirement, because of output voltage and current are nearer to sinusoidal. To highlight the merits and performance of this proposed concept was simulating in MATLAB/Simulink.

Published in: 2017 Third International Conference on Advances in Electrical, Electronics, Information, Communication and Bio-Informatics (AEEICB)

Date of Conference: 27-28 February 2017

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Date Added to IEEE *Xplore*: 11 July 2017

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Contents

In this modern trend of renewable energy sources, the demand for developing the PV system is increasing day by day because of excellent characteristics in main aspects compared to the other renewable sources. In present days PV installations are increasing exponentially mainly with support of government to develop the green energy concept. One of the foremost vital varieties of PV installation is that the grid connected electrical converter configurations. These grid connected PV systems is classified from two main points: PV cell and electrical converter configurations Fig. 1. The PV cell should be classified into five groups: string, multi-string, AC-cell, AC-module and centralized technology.

Authors

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Figures

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Citations

Keywords

Metrics

Architecture based performance evaluation of IIR digital filters for DSP applications

Publisher: IEEE

P. Bujjibabu ; N. Sravani All Authors

Abstract:A relatively recent innovation in the domain of digital filtering has been the introduction of signal processing applications with effective power utilization. No scope t... **View more**

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Abstract:

A relatively recent innovation in the domain of digital filtering has been the introduction of signal processing applications with effective power utilization. No scope towards the effective and efficient architecture realization with existing part of literature, and hence investigation is made and is confined with cascade form of filter design. In this paper, architectures are realized based on common set of specifications to arrive at the high performance recursive filter for low power applications using Xilinx System Generator. Infinite Impulse Response (IIR) filters can be realized in many forms those are Direct form-I, Direct form-II, Cascade, parallel form. All these structures provide a space for selection of an appropriate architecture for reduction of power consumption and improvement in speed of digital filters. In this particular work, a 5 th order low pass IIR filter is realized in Direct form-I, Direct form-II, Cascade form (Direct form-I/ Direct form-II) as an example of the methodology in a Xilinx FPGA device. Also corresponding power analysis was performed and finally concluded that cascade (Direct form-I) realization is the best technique to implement higher order IIR filters when power is a main constraint, cascade (Direct form-II) technique is best with area and speed as constraints.

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DOI: 10.1109/ICBDACI.2017.8070838

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Contents

NEED FOR LOW POWER: Reduction of power consumption and dissipation [11] [12] is significantly important for all high performance systems since it is desirable to maximize the run time with minimum requirements in size, battery life and weight of batteries. That's why the technology with low power consumption has become a major subject in today's electronic world.

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Figures

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Design and implementation of efficient IIR LMS adaptive filter with improved performance

P. Bujjibabu ; K. Sirisha All Authors

Abstract: The evolution of multi-feature portable devices with high speed processors and with drastic growth in component density turns the designer attention towards power aware d... **View more**

▸ **Metadata**

Abstract:

The evolution of multi-feature portable devices with high speed processors and with drastic growth in component density turns the designer attention towards power aware design schemes. In low power VLSI designs an adaptive filter can obtain a reduction in terms of area and power consumption. A system with a linear transfer function controlled by variable parameters and a means to adjust those parameters according to an optimization algorithm is called adaptive filter. The Least Mean Square (LMS) filter is one of adaptive filters type which is used commonly, because of its simplicity and also because of its satisfactory convergence performance. The current IIR adaptive filter uses LMS to reduce area-delay product and energy-delay product. To reduce this delay one can implement filter in pipelined structure. Shift-add tree efficiently minimizes the critical path and silicon area without increasing the number of adaptation delays. The structure of IIR adaptive filter designing is done by using two main blocks: IIR block and new coefficients block (weights block). Weights block consists of series of partial product generators and shift/add tree. Partial product generators has 2 to 3 decoders and AND/OR cells. Weights block performs multiply accumulate operations. Filter block depends upon on the new filter coefficients obtaining from weights block. The proposed filter is designed in MATLAB (2013a) for its performance characteristics and its constraints are verified using XILINX (ver14.7) implemented on FPGA.

Published in: 2017 International Conference on Big Data Analytics and Computational Intelligence (ICBDAC)

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Contents

DIGITAL filters are indispensable elements in signal processing and find numerous applications in industrial electronics like, power system, automatic control, and communications engineering. At the time of 1960 they began to be interjecting in the literature. With the eloquence advancements in digital technologies, digital filters began to offer cognizant puritanical solutions to many problems of the past.

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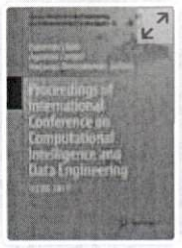

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Sections

Proceedings of International Conference on Computational Intelligence and Data Engineering pp 293–300

Handwritten Symbol Recognition Using Hierarchical Shape Representation Model Based on Shape Signature

M. Raja Babu, T. Gokaramaiah & A. Vishnuvardhan Reddy

Conference paper | First Online: 21 December 2017

Part of the Lecture Notes on Data Engineering and Communications Technologies book series (LNDECT,volume 9)

Abstract

The Signature represents visual object shape 2D contour in 1D to recognition shape of the objectQuery. This 1D shape representation translated into Centroid Distance Histogram (CDH) Gokaramaiah et al. (Comput Graph Image Process 25:357–370, 1974 [16]) to achieve invariant transformations such as translation, scale, rotation, flip. The CDH representation performs well in content-based image retrieval system with low computational complexity and this representation

19. O. Starostenko, C. K. Cruz, A. Chavenz-Aragon, and R. Contreras. A novel shape indexing method for automatic classification of lepidoptera. *IEEE Computer Society*, 2007.

Author Declaration

We the undersigned declare that this manuscript is original, has not been published before and is not currently being considered for publication elsewhere. We confirm that all ethical approvals have been granted to the authors regarding data managed in this research. We further confirm that any aspect of the work covered in this manuscript has been conducted with the ethical approval of all relevant bodies and that such approvals are acknowledged within the manuscript.

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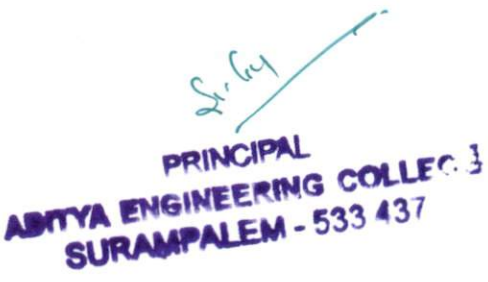

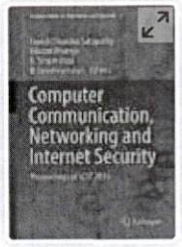

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Computer Communication, Networking and Internet Security

Proceedings of IC3T 2016

Editors: Suresh Chandra Satapathy, Vikrant Bhateja, K. Srujan Raju, B. Janakiramaiah

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Part of the book series: Lecture Notes in Networks and Systems (LNNS, volume 5)

Sections

Computer Communication, Networking and Internet Security pp 283–290

Novel Hash Based Key Generation for Stream Cipher in Cloud

K. DeviPriya & L. Sumalatha

Conference paper | First Online: 04 May 2017

Part of the Lecture Notes in Networks and Systems book series (LNNS,volume 5)

Abstract

Cloud Computing is an advanced technology which provides services to the users on rental basis. Cloud minimizes the installation cost of hardware, software, applications setup at client side and these services are available at cloud server, accessed by any one, any time, any place through the internet. Apart from the benefits one big challenge faced by the cloud is security problem as the data and resources are not under the control of data owner. Security techniques are required to protect data from the unauthorized access. In this paper, we proposed simple efficient stream cipher to protect information which is stored in the cloud. Also a hash based key is generated for encryption. The

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