



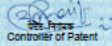


IIT Indore Patent Grant Press Note

For Immediate Release:

Grant of Patent from Department of Electrical Engineering IIT Indore

		क्रमांक : 022117681 SL No :
INTELLECTUAL PROPERTY INDIA PATENTS DESIGNS TRADE MARKS GEOGRAPHICAL INDICATIONS	भारत सरकार GOVERNMENT OF INDIA पेटेंट कार्यालय THE PATENT OFFICE पेटेंट प्रमाणपत्र PATENT CERTIFICATE (Rule 74 Of The Patents Rules)	
पेटेंट सं. / Patent No.	:	394437
आवेदन सं. / Application No.	:	201621034132
फाइल करने की तारीख / Date of Filing	:	05/10/2016
पेटेंटी / Patentee	:	INDIAN INSTITUTE OF TECHNOLOGY INDORE
आविष्कारक (जहां लागू हो) / Inventor(s)	:	1.Reniwal Bhupendra Singh 2.Vishvakarma Santosh Kumar
<p>प्रमाणित किया जाता है कि पेटेंटी को उपरोक्त आवेदन में बयां प्रकटित OFFSET COMPENSATED DATA SENSING TECHNIQUE FOR LOW ENERGY EMBEDDED SRAM नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख 5th day of October 2016 से बीस वर्ष की अवधि के लिए पेटेंट अनुदान किया गया है।</p> <p>It is hereby certified that a patent has been granted to the patentee for an invention entitled OFFSET COMPENSATED DATA SENSING TECHNIQUE FOR LOW ENERGY EMBEDDED SRAM as disclosed in the above mentioned application for the term of 20 years from the 5th day of October 2016 in accordance with the provisions of the Patents Act, 1970.</p>		
		
अनुदान की तारीख : 07/04/2022 Date of Grant :		
 Controller of Patent		
<p>टिप्पणी - इस पेटेंट के नवीकरण के लिए लागू, यदि इसे बनाए रखना होगा है. 5th day of October 2018 की और उसके पचास साल तक वर्ष से जारी किया जा रहा होगा। Note - The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 5th day of October 2018 and on the same day in every year thereafter.</p>		

Patent Details

Indian Patent Application No.- 201621034132

Grant No.- 394437

Filing Date- October 5, 2016

Date of Grant- April 7, 2022

Title of the Patent- OFFSET COMPENSATED DATA SENSING TECHNIQUE FOR LOW ENERGY EMBEDDED SRAM

Inventors- Bhupendra Singh Reniwal, Santosh Kumar Vishvakarma

Contact Details

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The IIT Indore granted a patent on “**OFFSET COMPENSATED DATA SENSING TECHNIQUE FOR LOW ENERGY EMBEDDED SRAM**” from the Patent Office, Government of India. These days, microprocessor-based hand-held devices are comprised of embedded memory which characterizes a huge share of the system-on-chip (SoC) and is susceptible to functional failure because of offset during chip fabrication. Considering this, the inventors Dr. Bhupendra Singh Reniwal and Prof. Santosh Kumar Vishvakarma from the Indian Institute of Technology Indore have developed a novel semiconductor memory architecture for low-energy electronics devices. The inventors developed a novel technique that can tolerate the variations in the modern IC fabrication process which lead to the failure of modern chips. This technique will enable the emerging chips to be fast enough in terms of reading the data from processor on-chip memory and will consume low energy. This will help to increase the accuracy, speed and consume low energy for data processing in Neuromorphic computing chips, low-energy wearable electronics devices, smartphones, personal healthcare assistants, and smart Cyber-Physical Systems applications

Dr. Bhupendra Singh Reniwal graduated from [SGSITS-Indore](#) and received Ph.D. from [IIT Indore](#). He has a mix of **industry and academic** experience both in India and abroad as a **Senior Product Development Engineer**, Semiconductor Vertical in [UST Global](#) Bangalore, Intel Corporation Malaysia, and IBM Bangalore. Where he was involved in developing Energy-Efficient Memory Architecture, I/O Circuit Design He has also served the, [BITS Pilani, K. K. Birla Goa](#) Campus as a faculty in the year 2017.

Dr. Santosh Kumar Vishvakarma is a Professor in the Department of Electrical Engineering, [Indian Institute of Technology Indore](#), MP. He is engaged in teaching and research in the area of Energy-Efficient and Reliable SRAM Memory Design, Enhancing Performance and Configurable Architecture for DNN Accelerators, SRAM-based In-Memory Computing Architecture for Edge AI, Reliable, Secure Design for IoT Application, Design for Reliability. Dr. Vishvakarma obtained a Ph.D. degree on the topic from Microelectronics and VLSI Group, Department of Electronics and Computer Engineering, [Indian Institute of Technology, Roorkee \(IITR\)](#) in 2010.

