IIT Indore Patent Grant Press Note

For Immediate Release:

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Grant of Patent from Electrical Engineering Department, IIT Indore.

Details:
Indian Patent Application No.- 201621038192
Grant No.- 370308
Filing Date- November 8, 2016
Date of Grant- June 25, 2021
Title- LOW LEAKAGE-HIGH STABILITY DIFFERENTIAL POSITIVE FEEDBACK CONTROLLED 10T (DPFC10T) SRAM CELL
Inventors- Pooran Singh, Santosh Kumar Vishvakarma

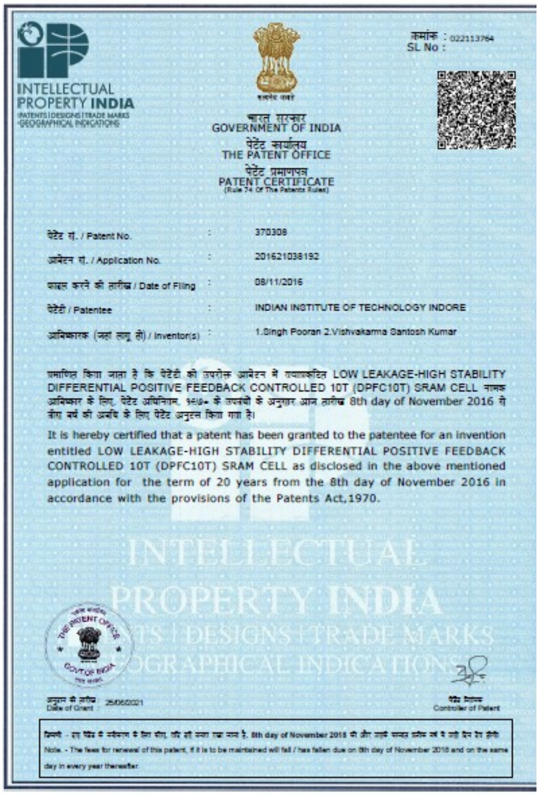
The IIT Indore patent on “LOW LEAKAGE-HIGH STABILITY DIFFERENTIAL POSITIVE FEEDBACK CONTROLLED 10T (DPFC10T) SRAM CELL” is granted by the Patent Office, Government of India. The inventors Dr. Pooran Singh and Prof. Santosh Kumar Vishvakarma from the Indian Institute of Technology Indore has proposed a novel static random-access memory (SRAM) for low power applications. The inventors impression is to develop a low power SRAM cell that works in subthreshold voltages (below the threshold voltage of transistor). The design is more suitable for ultra-low-power battery-operated wearable electronic devices such as wireless sensors, mobile or any other handheld devices. These days, microprocessor-controlled hand-held devices are comprised of embedded memory which characterizes a huge share of the system-on-chip (SoC). These hand-held systems require ultra-low power circuits to operate with the battery for a longer duration. Applications of ultra-low power SRAM are extremely broad including neural signal processor, sub-threshold processor, biomedical implants, wireless sensing, low voltage cache operation, etc. These applications demand careful design by maintaining the associated trade-off between power, stability and speed. In order to adhere to intense downscaling trends and the trade-off, a low power SRAM has been presented in our work.

Dr. Pooran Singh did his Ph.D. (2018) from the Department of Electrical Engineering, IIT Indore. Currently he is an Assistant Professor in the Electrical and Electronics Engineering Department at Mahindra University (MU) École Centrale School of Engineering.

Prior to joining MU, he was an Analog Design Engineer (SRAM Design) at Intel Microelectronics, Penang, Malaysia, his primary work included designing SRAM circuits, Pre-layout SRAM design and analysis of its various design parameters.

Dr. Santosh Kumar Vishvakarma is with the Department of Electrical Engineering, Indian Institute of Technology Indore, MP, India as an Associate Professor. He is engaged with 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 Ph.D. degree on the topic "Analytical Modeling of Low Leakage MGDG MOSFET and its Application to SRAM" from Microelectronics and VLSI Group, Department of Electronics and Computer Engineering, Indian Institute of Technology, Roorkee (IITR) in 2010.



INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
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सत्यमेव जयते

भारत सरकार
GOVERNMENT OF INDIA
पेटेंट कार्यालय
THE PATENT OFFICE
पेटेंट प्रमाणपत्र
PATENT CERTIFICATE
(Rule 74 Of The Patents Rules)

क्रमांक : 022113764
SL No :

पेटेंट सं. / Patent No.	:	370308
आवेदन सं. / Application No.	:	201621038192
फाइल करने की तारीख / Date of Filing	:	08/11/2016
पेटेंटी / Patentee	:	INDIAN INSTITUTE OF TECHNOLOGY INDORE
आविष्कारक (जहां लागू हो) / Inventor(s)	:	1.Singh Pooran 2.Vishvakarma Santosh Kumar

प्रमाणित किया जाता है कि पेटेंटी को उपरोक्त आवेदन में यथाप्रकटित LOW LEAKAGE-HIGH STABILITY DIFFERENTIAL POSITIVE FEEDBACK CONTROLLED 10T (DPFC10T) SRAM CELL नामक आविष्कार के लिए, पेटेंट अधिनियम, १९७० के उपबंधों के अनुसार आज तारीख 8th day of November 2016 से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled LOW LEAKAGE-HIGH STABILITY DIFFERENTIAL POSITIVE FEEDBACK CONTROLLED 10T (DPFC10T) SRAM CELL as disclosed in the above mentioned application for the term of 20 years from the 8th day of November 2016 in accordance with the provisions of the Patents Act,1970.

अनुदान की तारीख : 25/06/2021
Date of Grant :

पेटेंट नियंत्रक
Controller of Patent

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, 8th day of November 2018 को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।
Note. - The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 8th day of November 2018 and on the same day in every year thereafter.