

# MEDICAL IMAGE COMPRESSION USING SPIHT COMBINED WITH ARITHMETIC CODING

A. HAZARATHAIAH<sup>1</sup>, B. PRABHAKARA RAO<sup>2</sup> & C. MADHU<sup>3</sup>

<sup>1</sup>Professor, Department of ECE, SV College of Engineering, Karakambadi Road, Tirupati, Andhra Pradesh, India

<sup>2</sup>Rector, Department of ECE, Jawaharlal Nehru Technological University Kakinada, Kakinada, Andhra Pradesh, India

<sup>3</sup>Assistant Professor, SV Engineering College for Women, Karakambadi Road, Tirupati, Andhra Pradesh, India

## ABSTRACT

This paper deals with the basic requirements like data rate and storage capacity of a system while converting analog data to digital data. These requirements can be achieved by compressing the data. There are number of image compression techniques, but this paper concentrates on Set Partitioning in Hierarchical Trees (SPIHT), which is a wavelet based compression algorithm that offers good compression ratios, fully progressive bit-stream and good image quality. This paper presents the results of adding arithmetic compression to the SPIHT images in the hopes of further reducing the image size with better data rates and image quality.

**KEYWORDS:** Image Compression, SPIHT, Arithmetic Coding, Compression Ratio, PSNR