

## **A Novel Approach to Design of EDDR Architecture for High Speed Motion Estimation Testing Applications**

**Authors :** T. Gangadhararao, K. Krishna Kishore

**Abstract :** Motion Estimation (ME) plays a critical role in a video coder, testing such a module is of priority concern. While focusing on the testing of ME in a video coding system, this work presents an error detection and data recovery (EDDR) design, based on the residue-and-quotient (RQ) code, to embed into ME for video coding testing applications. An error in processing Elements (PEs), i.e. key components of a ME, can be detected and recovered effectively by using the proposed EDDR design. The proposed EDDR design for ME testing can detect errors and recover data with an acceptable area overhead and timing penalty.

**Keywords :** area overhead, data recovery, error detection, motion estimation, reliability, residue-and-quotient (RQ) code

**Conference Title :** ICCPM 2014 : International Conference on Construction and Project Management

**Conference Location :** Cape Town, South Africa

**Conference Dates :** November 06-07, 2014