

A High-Performance Hardware-Efficient Memory Allocation Technique and Design

Cam, H. Abd-El-Barr, M. Sait, S.M.; Dept. of Comput. Eng., King Fahd Univ. of
Pet. Miner., Dhahran;

**Computer Design, 1999. (ICCD '99) International conference; Publication Date:
1999; ISBN: 0-7695-0406-X**

King Fahd University of Petroleum & Minerals

<http://www.kfupm.edu.sa>

Summary

This paper presents a hardware-efficient memory allocation (EMA) technique designed to eliminate both internal and external fragmentation that appear in the buddy system. EMA can allocate a free memory block of any size in any part of memory. Hardware implementation of EMA is introduced, but only part of its circuits is shown in the paper due to the space limitation. Simulation results show that EMA utilizes memory space more efficiently than the previously known techniques

For pre-prints please write to: abstracts@kfupm.edu.sa