

Multi-Dimensional Image-to-Mesh Conversion on Massively Parallel Systems

Panagiotis Foteinos^{1,2} and Nikos Chrisochoides²

¹ Computer Science Department, College of William & Mary, Virginia, USA,
`pfot@cs.wm.edu`

² Computer Science Department, Old Dominion University, Virginia, USA,
`nikos@cs.odu.edu`

Abstract. FEM simulations on four dimensional meshes have been shown to be quite accurate. In this abstract, we propose a multi-layer approach for generating four dimensional meshes from binary medical images. Our technique takes advantage of both the faster shared-memory layers when the communication cost is high, and the larger (but slower) distributed memory layers when a lot of memory allocation is required.