A Hybrid Method for the Update of Sub-domain Interfaces *

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ABSTRACT

Many engineering applications involve significant computational time, which needs to be reduced by means of a fast solution method or parallel and high performance algorithms. It is well known that multigrid methods serve as a fast iterative scheme for linear and nonlinear diffusion problems. On the other hand, many engineering applications require collaborative work using components, which are being solved in a distributed environment. Therefore it is necessary to develop collaborative methodologies in modern distributed computing environment. This paper develops a hybrid method for the update of sub-domain interfaces in an attempt to provide a distributed algorithm suitable for future Grid computing.

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