

Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

©2011. Japan Geoscience Union. All Rights Reserved.



MGI031-07

会場:201A

時間:5月25日 14:45-15:00

バーチャルリアリティ可視化ツールの開発と統合 Development of virtual reality visualization software

陰山 聡^{1*}, 村田 歌織¹, 目野 大輔¹, 吉崎 健一¹

Akira Kageyama^{1*}, Kaori Murata¹, Daisuke Meno¹, Ken-ichi Yoshizaki¹

¹ 神戸大学 システム情報学研究科

¹ Kobe University

Visualization is a key step in computational geosciences. Researchers can find structures and dynamics that are hidden in the "sea" of numerical data. In accordance with the exponential growth of computer hardware and simulation methods, complexity of the output data and, therefore, the difficulty of their visualizations are rocketing up these days. A new technology for visualization is strongly required and will be more in future. The modern virtual reality (VR) technology, especially the so-called CAVE system, provides an answer to this challenge. We have been developing, in these several years, visualization tools for CAVE-type VR systems and combined them into a framework, VFIVE. We have applied VFIVE to analyze various types of geophysical simulations. Recent study of our VR visualization will be reported. New visualization methods implemented in VFIVE are (i) Interactive Time Line Method for frozen-in vector fields, and (ii) Interactive Force Line Methods for general vector fields. We have also started to implement our VR visualization framework on a new API, VR Juggler. The status of the development will also be reported.

キーワード: 可視化, バーチャルリアリティ, CAVE 装置

Keywords: visualization, virtual reality, CAVE