DISTRIBUTED GRAPHICS ON SUPERCOMPUTERS AND WORKSTATIONS FOR OPERATIONAL METEOROLOGY

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Abstract:

Graphics as currently implemented in meteorological centres has meant the batch production of displayable images on either the supercomputer or the front-end computers. This is accomplished using file-level transfers of fields or images between the supercomputer and the front-end and the use of various graphics application programs. A film of the dispersion of iodine isotopes following the Chernobyl accident, as simulated by an atmospheric model from the Canadian Meteorological Center, demonstrates the batch production of graphic animation using supercomputers.

Recent developments from vendors allow interactive access, record-level transfers, and real-time display in the supercomputer-workstation environment. A film of the real-time computation and display of images on a high-resolution workstation connected to a supercomputer demonstrates this potential capability.