



libIGCM, operational running environment for ESM and its components

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The Pierre Simon Laplace Institut (IPSL), like many other modeling groups, is involved in the development of a comprehensive Earth System Model (ESM) to study the interactions between chemical, physical, and biological processes. This work requires the coupling of the different components (land, ocean, atmosphere, chemistry...) which demands a running environment platform for all the possible and interdependent configurations. A «**library for IPSL Global Climate Modeling Group** », called libIGCM, has been developed recently to handle the complete workflow of any configuration, from the pre-processing to the post-processing state.

The aim of this talk is to define precisely the libIGCM's philosophy, structure and application. The leading idea is to have one same job (launched with a scheduler or just as a script shell) for potentially any configuration and simulation type (i.e. coupled, forced, CMIP3, AMIP, C4MIP). The portability of this job comes from a set of "cards" describing the model configuration and its components. This ksh library contains only one system dependent layer (a computing center, or just a standalone workstation). It contains a predefined set of functions for the pre-processing, the computing (i.e. SX, Itanium, X86_64) and the post-processing machines. This running environment allows to easily transport a complete simulation from a computer to another.

libIGCM does currently run all the IPSL's different configurations, from standalone land surface model to the under heavy development Earth System Model configura-

tion.

Upcoming developments will be focussed on metadata (related to Metafor and Curator projects), followed by developements to bridge the gap between data produced by models and files distributed (related to CMOR project).