The purpose of the PRISM system is to enable users to perform numerical experiments, coupling interchangeable model components, eg Atmosphere, ocean, biosphere, chemistry etc., using standardised interfaces. The general architecture provides the infrastructure to configure, submit, monitor and subsequently postprocess, archive and diagnose the results of these coupled model experiments. Such choice of architectural design allows these activities to be done remotely through the internet. The configuration provider processes are accessed through a central site but the services can be distributed to other sites. The execution process is local to the model provider. This type of architecture is described as directory centric.

PRISM Targets:
- Users – Running model experiments on remote hosts.
- Developers – Software developers creating models.

PRISM Requirements
- Users - Support and pre-tested configurations to minimise errors.
- Developers - Full control of all aspects of the compiling and building environment.

PRISM Functionality:
- Model and Configurations.
- Diagnostics.
- Archiving.
- Source code archive and versioning.
- Experiment database

Prepifs enables
- To select individual model components to couple.
- To configure the specific Model Input and Output Configuration (SMIOC).
- To compose the Specific Coupling Configuration (SCC).
- To select pre-/post processing options.
- To select the site and computing resources

Prepifs will read and display the defaults options specified by the model administrator in a XML format (compiling options, Build Options, Running parameters...). Then the user can select and modify the experiment setup.

SMS enables to run a large number of programs with:
- Dependencies on one another.
- Dependencies in time.
- A good tolerance of hardware and software failures.
- Good restart capabilities

The colours represent the status of the different tasks:
Red : Abort    yellow : completed  blue : queued
green : repeated  Orange : suspended

A SMS setup only monitors the running or the compiling of the user experiment. Three type of files are necessary to create such setup (.Def files, SMS files, Scripts).
Configuration with PREPIFS

Monitoring With xcdp

High speed Disk

Save to disk

Configuration
- Model code
- Job definition templates
- Run scripts

Parametrisation process

Specific Model run
- Job definition

Submission of job control structure and job definition

Supervisor Monitor Scheduler (SMS)

Execution host queueing system

Submit complete job for local or remote execution

Job running