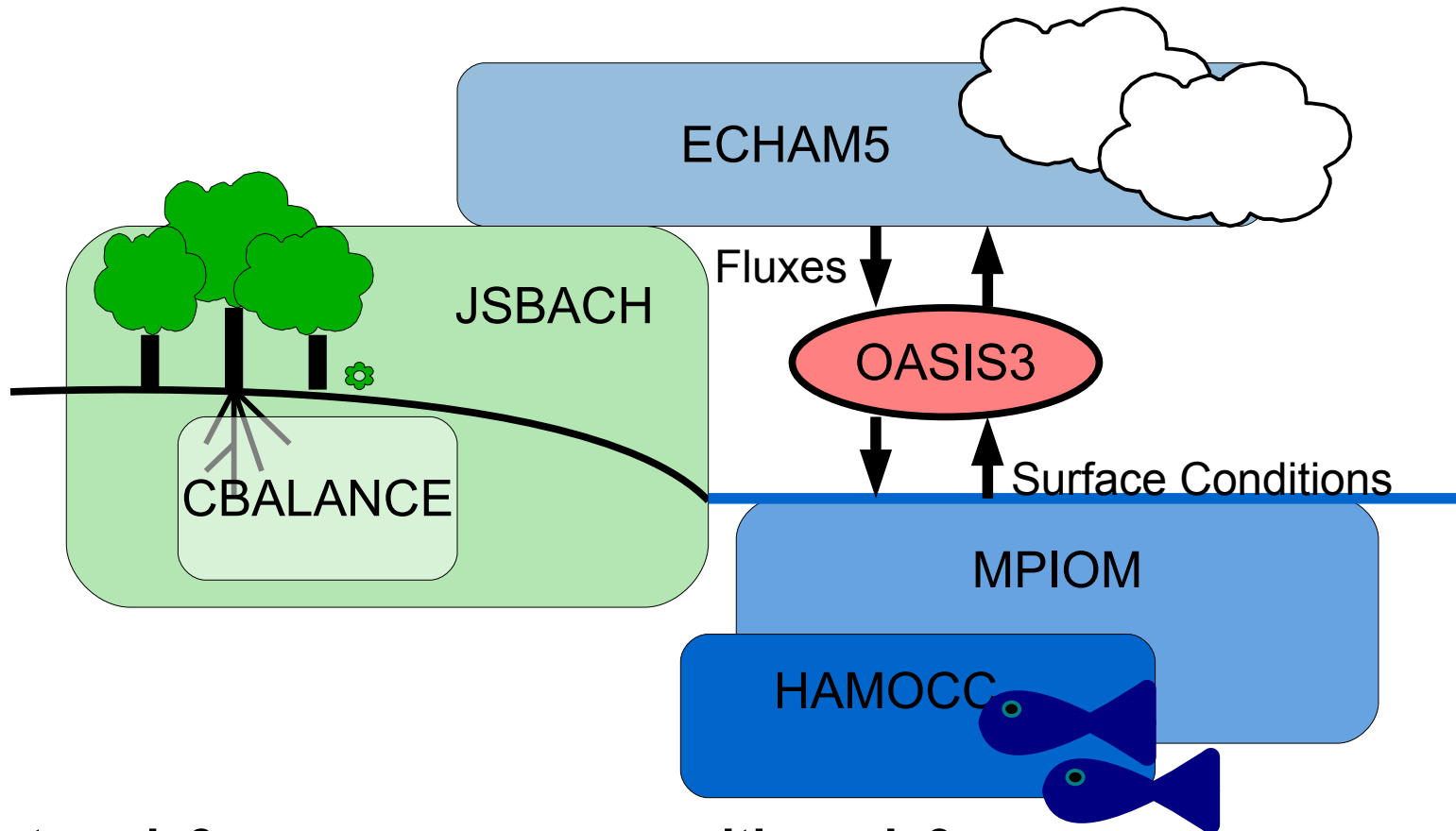


# Introduction to the Summerschool Recipe

Veronika Gayler, MPI-Met.

Earth System Modeling School 2010  
Hamburg, August 27<sup>th</sup> to September 3<sup>rd</sup> 2010

# The COSMOS Model Suite



## without oasis3

cosmos-a: echam5  
cosmos-s: jsbach  
cosmos-as: echam5-jsbach  
cosmos-o: mpiom  
cosmos-ob: mpiom-hamocc

## with oasis3

cosmos-ao: echam5/mpiom  
cosmos-aob: echam5/mpiom-hamocc  
cosmos-aso: echam5-jsbach/mpiom  
cosmos-asob: echam5-jsbach/mpiom-hamocc

# Integrating Model and Data Infrastructure (IMDI)

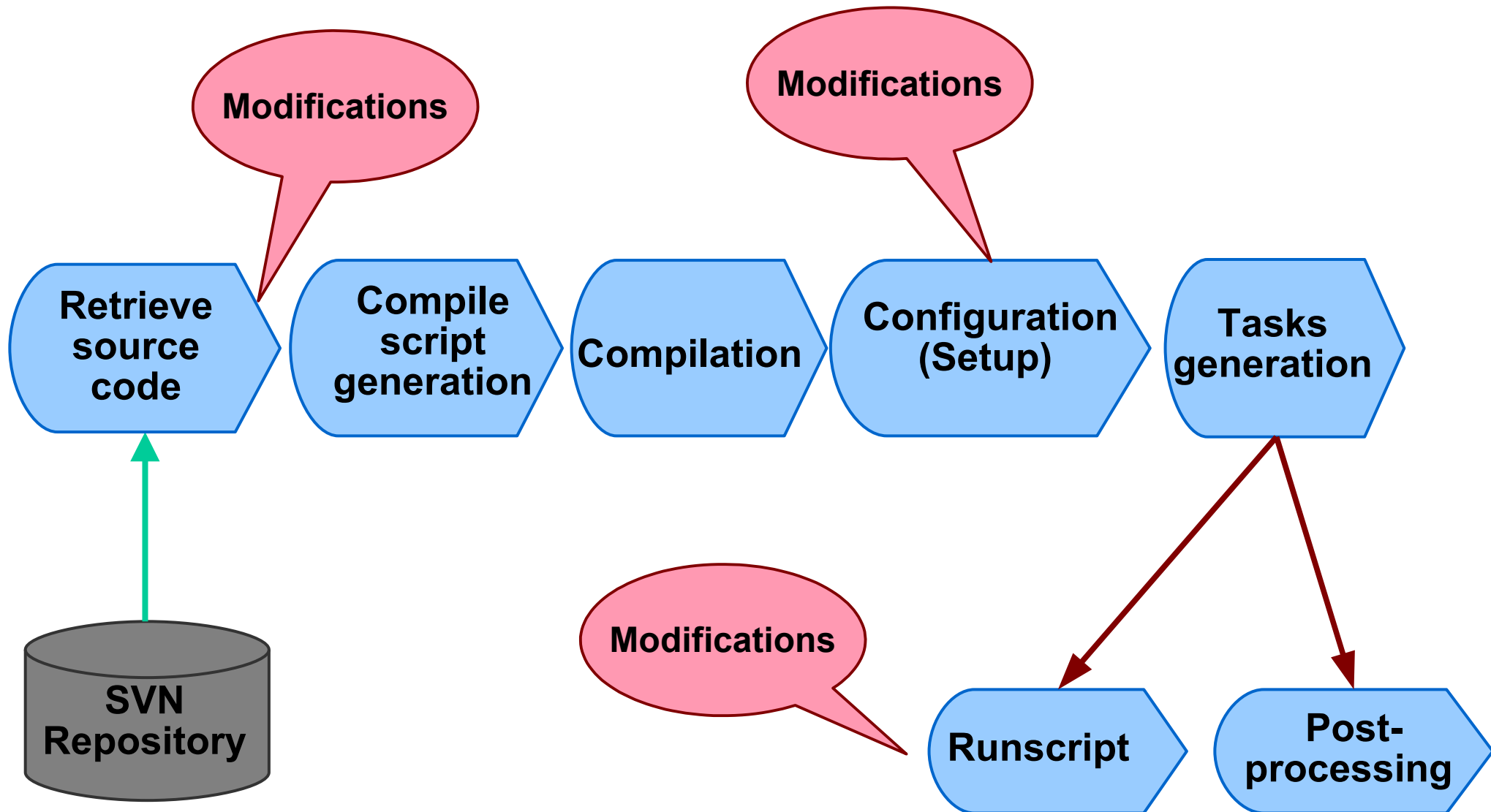
Developed and maintained by  
Model & Data in Hamburg



<http://www.mad.zmaw.de/imdi/>

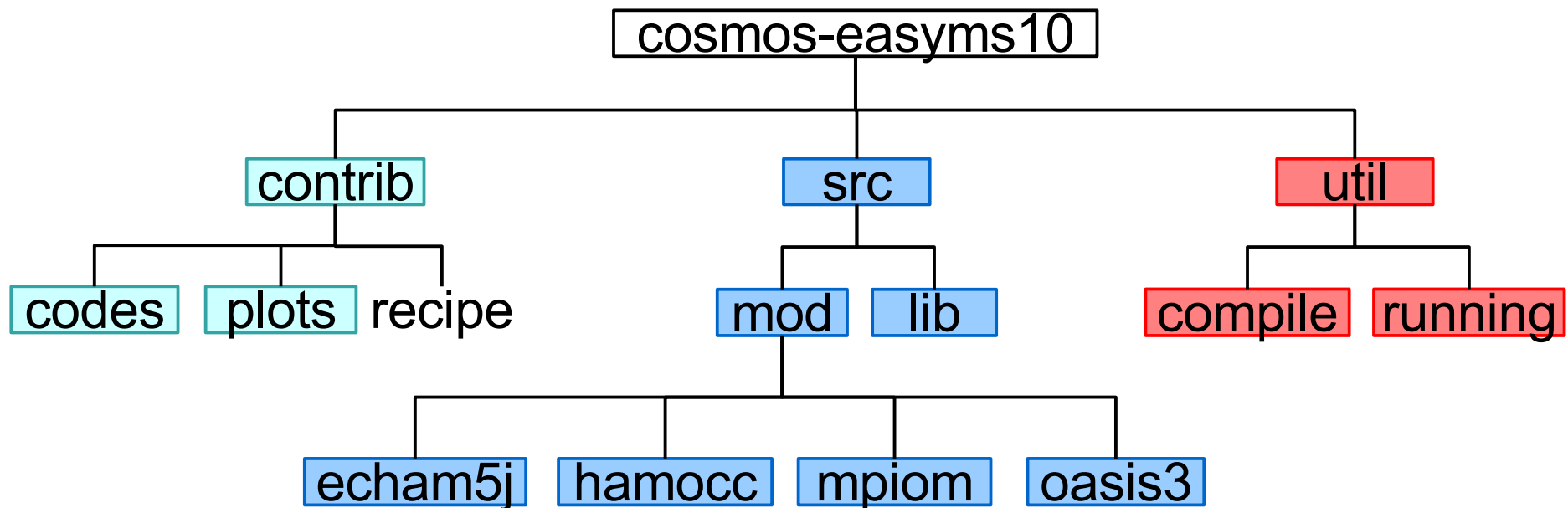
- Source code management
- Compilation of Earth System models
- Execution of numerical experiments
- Monitoring of running experiments
- Model result analysis

# Experiment flow



# Subversion Repository

```
svn checkout --username easym --password easym \  
http://svn.zmaw.de/svn/cosmos/branches/cosmos-easym10
```



# Compile Script Generation

Create\_COMP\_cpl\_models.ksh \

**cosmos-asob** -n **aix** -c **xlf** --id *expid*

## Compile Scripts

COMP\_echam5j\_exp<sup>id</sup>.ksh

COMP\_mpiom\_exp<sup>id</sup>.ksh

COMP\_hamocc\_exp<sup>id</sup>.ksh

COMP\_oasis3\_MPI1.ksh

COMP\_libs\_aix.ksh

## Executables

echam5j\_ID.MPI1.x

mpiom\_hamocc\_ID.MPI1.x

oasis3.MPI1.x

# Generation of Tasks

```
Create_TASKS.frm cosmos-asob -n aix -c xlf --id expid
```

```
setup_cosmos-asob_expid
```

**Modifications**

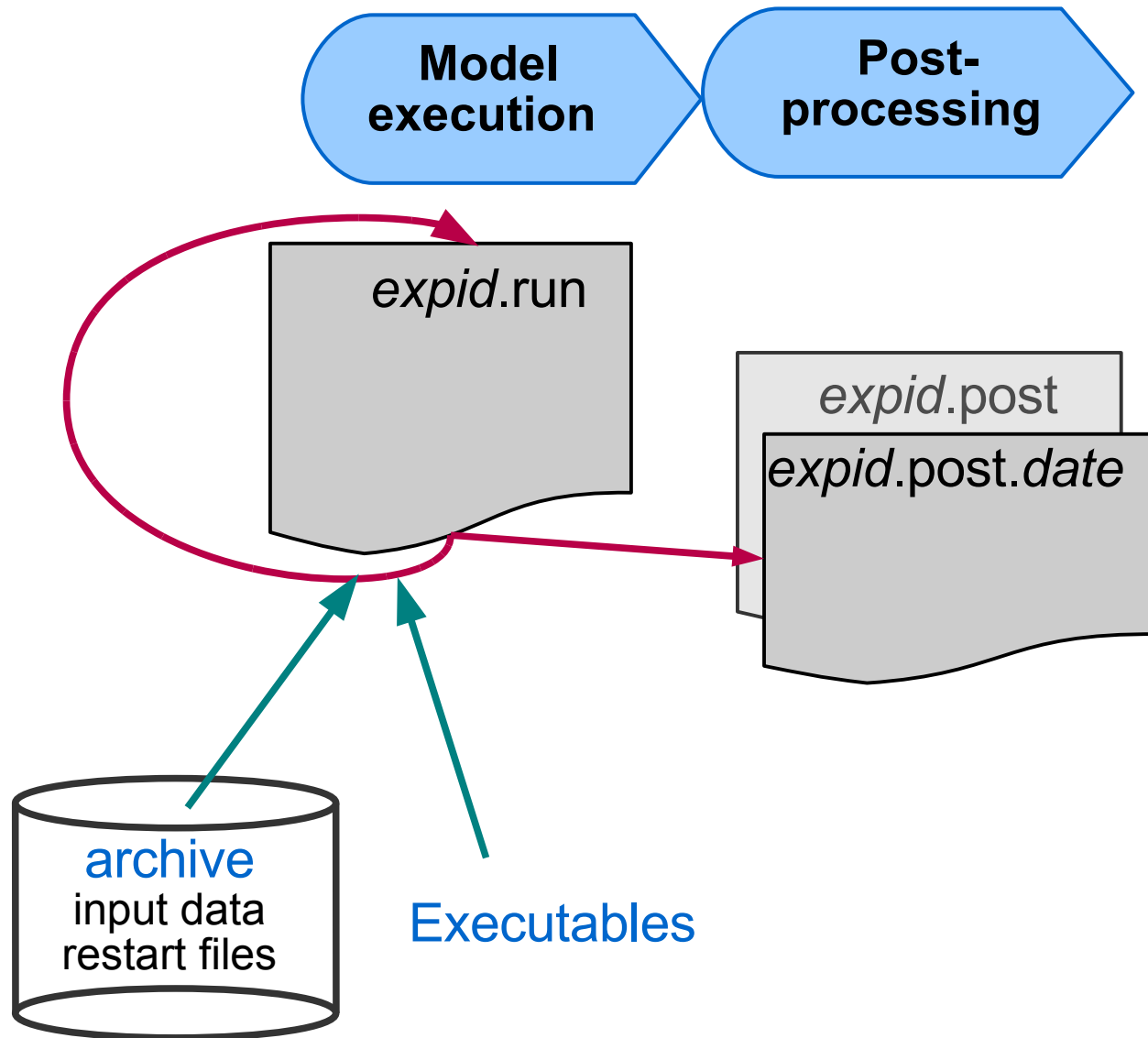
Include File  
Repository

```
*.h  
*node.h  
*model.h  
*cplmod.h
```

**Tasks**

```
expid.run - Model integration  
expid.post - Output data postprocessing
```

# Execution of an Experiment





# Experiment Control

*expid.log*

```
Fri Jun 19 19:01:39 EEST 2009 : Beginning of Experiment sus0000
Fri Jun 19 19:01:39 EEST 2009 : 1 08000101 152352 - start
Fri Jun 19 20:15:59 EEST 2009 : 1 08010101 152352 - done
Fri Jun 19 22:58:39 EEST 2009 : 2 08010101 152415 - start
Sat Jun 20 00:12:53 EEST 2009 : 2 08020101 152415 - done
Sat Jun 20 00:13:09 EEST 2009 : 3 08020101 152477 - start
```

date and time

job number

simulated time

job-ID

*expid.date*

```
08020101 3
```

year

month

day

job number