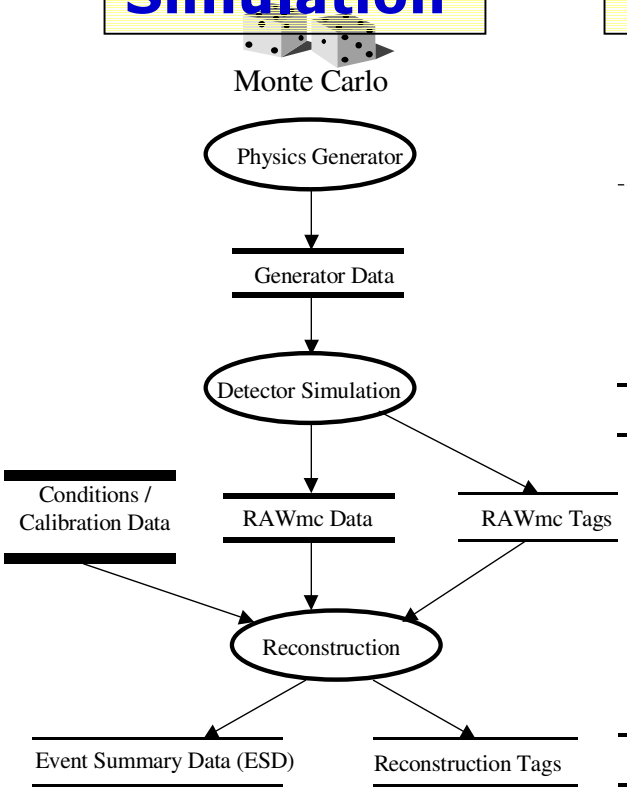
HEP GRID use cases

Common GRID use cases

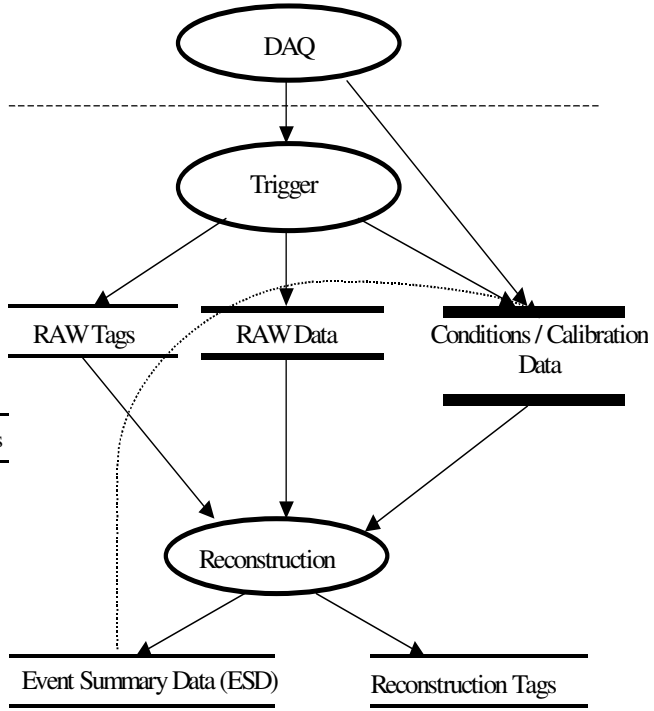
F.Harris, J.Templon, J.J Blaising

User Requirements

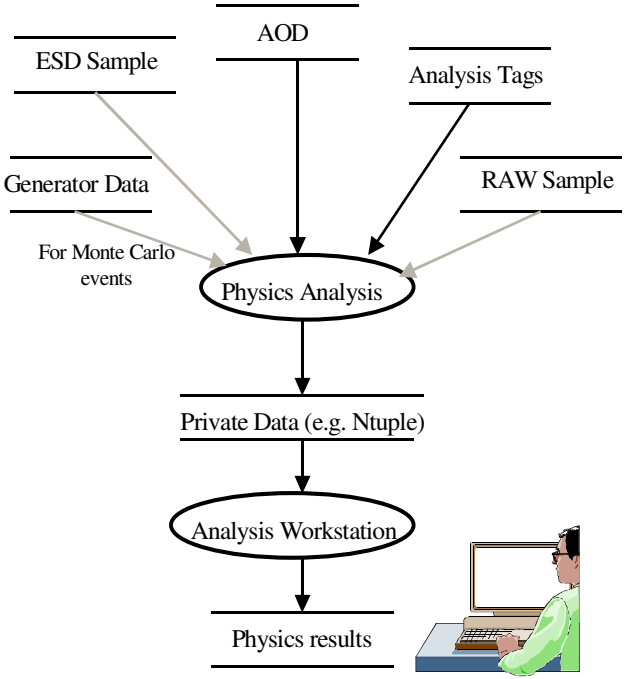
Simulation



Data reconstruction



Data Analysis



User requirements for production type work were collected by EDG WP8 and refined by the LCG RTAG -> HEPCAL document.

User Requirements

HEPCAL document describes:

- macro use cases

simulation, data transformation, production

- mini uses cases

which are used to implement the macro u.c

They were evaluated by WP8 and the results are documented in D8.3.

Data Set (DS) = file

Identifier UC#dstran

Goals in Context : *Creation of new data set starting from input data*

Actors : *User, Production manager*

Triggers : *Need of output data for further processing*

Included Use Cases: *Grid authorization, Grid login ,*

Browse Grid resources,

Steer Job, Job resources estimation, Set Job environment

Job submission, Job monitoring, Job cancel

DS access (Find PFN, copy, open);

DS upload (copy and register), DS transfer, DS register

DS replication; DS MD Browse, DS delete

Job output

General/VO/use cases

Mini Use Case	WP8	WP9	WP10	EDG
OBTAIN GRID AUTORISATION	y	y	y	y
ASK FOR REVOCATION OF GRID AUTHORISATION	y	x	x	y
GRID LOGIN	y	y	y	y
CONDITIONS PUBLISHING	n	n	n	n
SOFTWARE PUBLISHING	y	x	x	y
VO WIDE RESOURCE RESERVATION	n	n	n	n
VO WIDE RESOURCE ALLOCATION TO USERS	n	n	n	n
EXPERIMENT SOFTWARE DEVELOPMENT FOR THE GRID	y	x	x	y
BROWSE GRID RESOURCES	y	y	x	y

Data/Metadata use cases

Mini Use Case	WP8	WP9	WP10	EDG
DS METADATA UPDATE	n	?	?	n
DS METADATA ACCESS	n	y	n	n
DATASET REGISTRATION	y	y	y	y
VIRTUAL DATASET DECLARATION	n	n	n	n
VIRTUAL DATASET MATERIALIZATION	n	n	n	n
DATASET UPLOAD	y	y	y	y
USER-DEFINED CATALOGUE CREATION	n	n	n	n
DATASET ACCESS	y	y	y	y
DATASET TRANSFER TO NON GRID STORAGE	y	?	X	y
DATASET REPLICA UPLOAD TO THE GRID	y	y	y	y

Data/Metadata use cases

Mini Use Case	WP8	WP9	WP10	EDG
DATASET ACCESS COST EVALUATION	n	y?	N	n
DATASET REPLICATION	y	y	y	y
PHYSICAL DATA SET INSTANCE DELETION	y	x	x	y
DATASET DELETION	y	x	x	y
CATALOGUE DELETION	n	n	n	n
DATA RETRIEVAL FROM REMOTE DATASET	n	n	n	n
DATASET VERIFICATION	n	n	n	n
DATASET BROWSING	y	x	x	y
BROWSE EXPERIMENT DATABASE	n	n	n	n

Job management use cases

Mini Use Case	WP8	WP9	WP10	EDG
JOB CATALOGUE UPDATE	n	n	n	n
JOB CATALOGUE QUERY	n	n	n	n
JOB SUBMISSION	y	y	y	y
JOB OUTPUT ACCESS OR RETRIEVAL	y	y	y	y
ERROR RECOVERY FOR FAILED PRODUCTION JOBS	n	n	n	n
JOB CONTROL	y	y	y	y
STEER JOB SUBMISSION	y	y	y	y
JOB RESOURCE ESTIMATION	y	y	y	y
JOB ENVIRONMENT MODIFICATION	y	y	y	y
JOB SPLITTING	n	n	n	n
JOB MONITORING	y	y	y	y

Conclusions (to be discussed)

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WP8/9/10 have common requirements for

- VO and general management
- Information registration and browsing
- Job management
- Data management
- Metadata management

what else …