

CERA:

Data Structure and User Interface

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- Starting Point: The Requirements
- The CERA Characteristics
- CERA: Additional Features
- The Running System: Data streams
- The Running System: Inclusion of Foreign Sources
- The Graphical User Interface

What are the Requirements of a Meta Database ?

Capabilities

- ✗ meta information storage
- ✗ web enabled
- ✗ linked to data sources
- ✗ good Performance

Efficiency

- ✗ easy to change/extend in data structure
- ✗ ... and, of course, in content
- ✗ little effort for additional software (tools, etc.)
- ✗ easy to adapt to different user interfaces

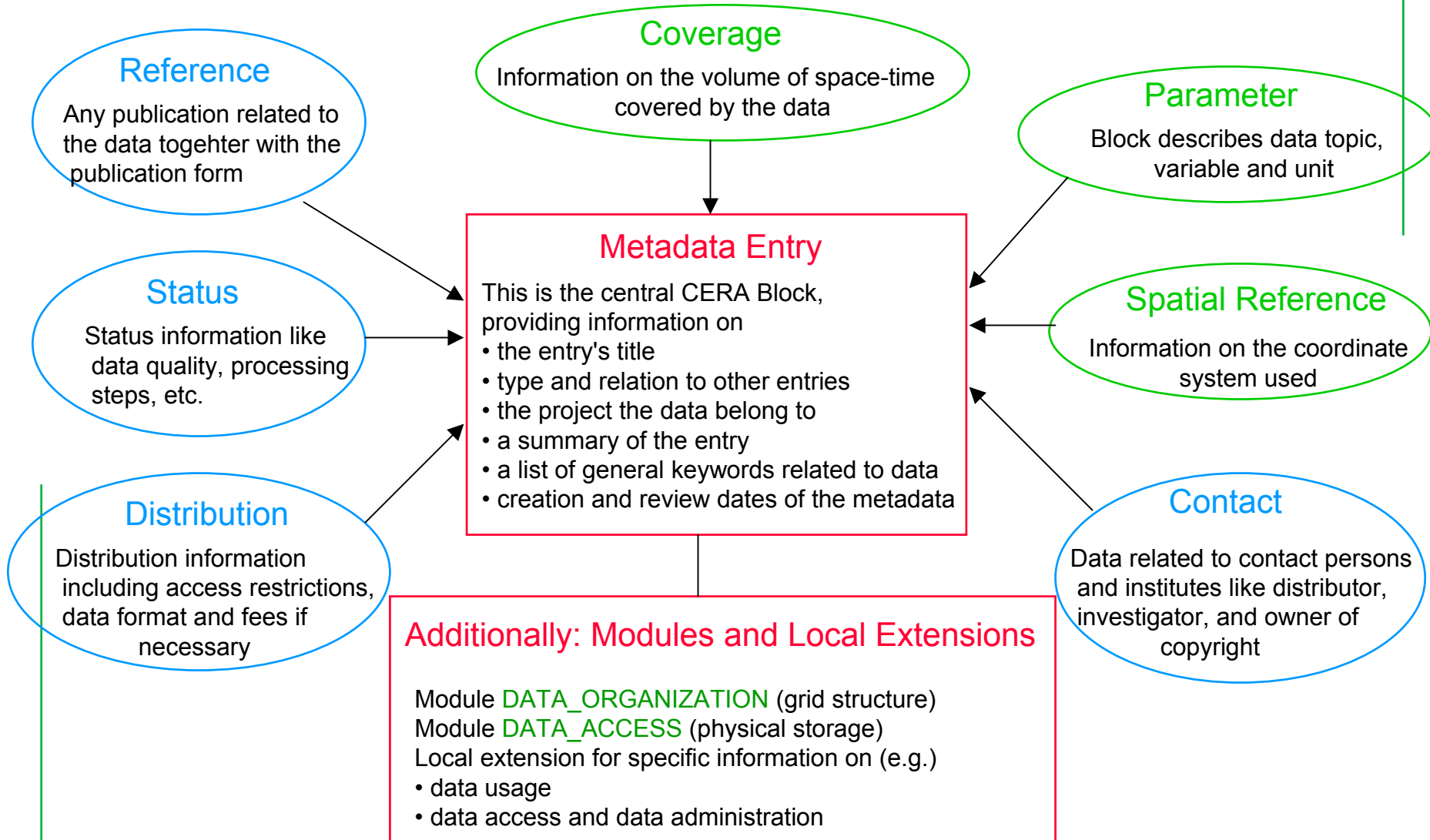
--- KEEP THINGS SIMPLE ---

How does CERA-2 meet these requirements ?

- ✘ by flexible structure: data structure not completely fixed
 - table groups form modules and submodules
 - local extensions for local integration and local needs

- ✘ by flexible content: definable fields and tables
 - definable entry types, contact information types, & various other i.e., definable contents of table groups
 - flexible lists of values (LOV): extensible but controlled
 - necessary: LOVs include attributes “acronym” & “description”
 - free text fields of user-defined contents: e.g., for automated data access

- ✘ by simple structure: blockwise tablegroups
 - CERA-2 Blocks have similar structure
 - more difficult structures go into CERA Blocks
 - some basic rules:
 - no <null>s allowed
 - negative topics in the LOVs: “none”, “n/a”, “not filled”

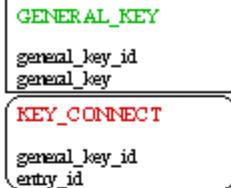


Some additional features

- ✂ allows for pointers between CERA Entries:
directed or symmetrical relations
- ✂ various views on CERA Modules for the
 - automatted data access and
 - axes description of multidimensional equidistant gridded data
 - including axes consisting of different equidistant patches
- ✂ information on in house data processing can be added to every entry

CERA SCHEME 2.5

BLOCK KEY_CONNECT



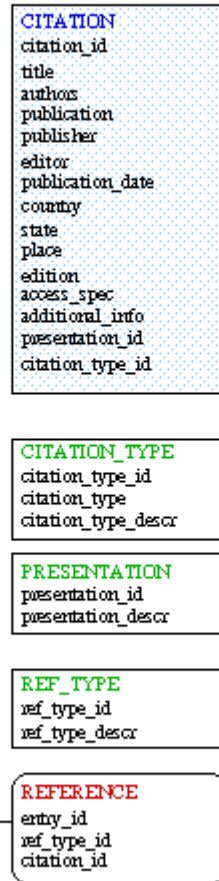
BLOCK CAMPAIGN



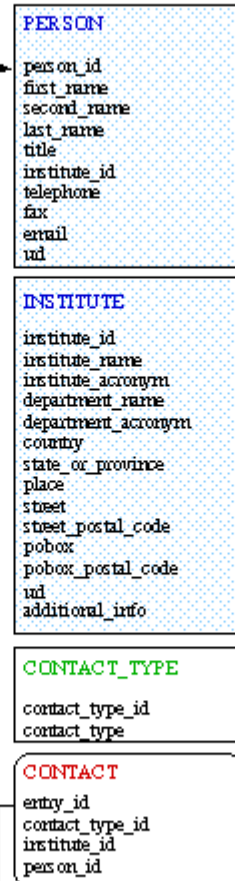
BL. METADATA ENTRY



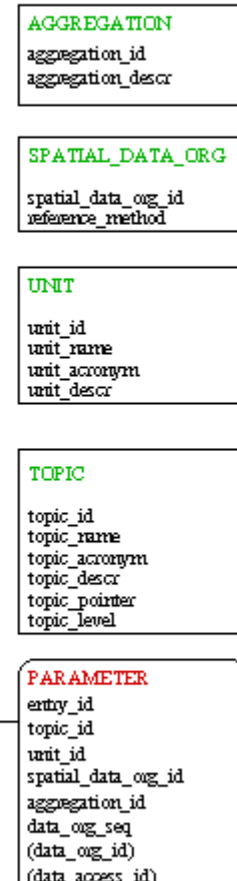
BLOCK REFERENCE



BLOCK CONTACT

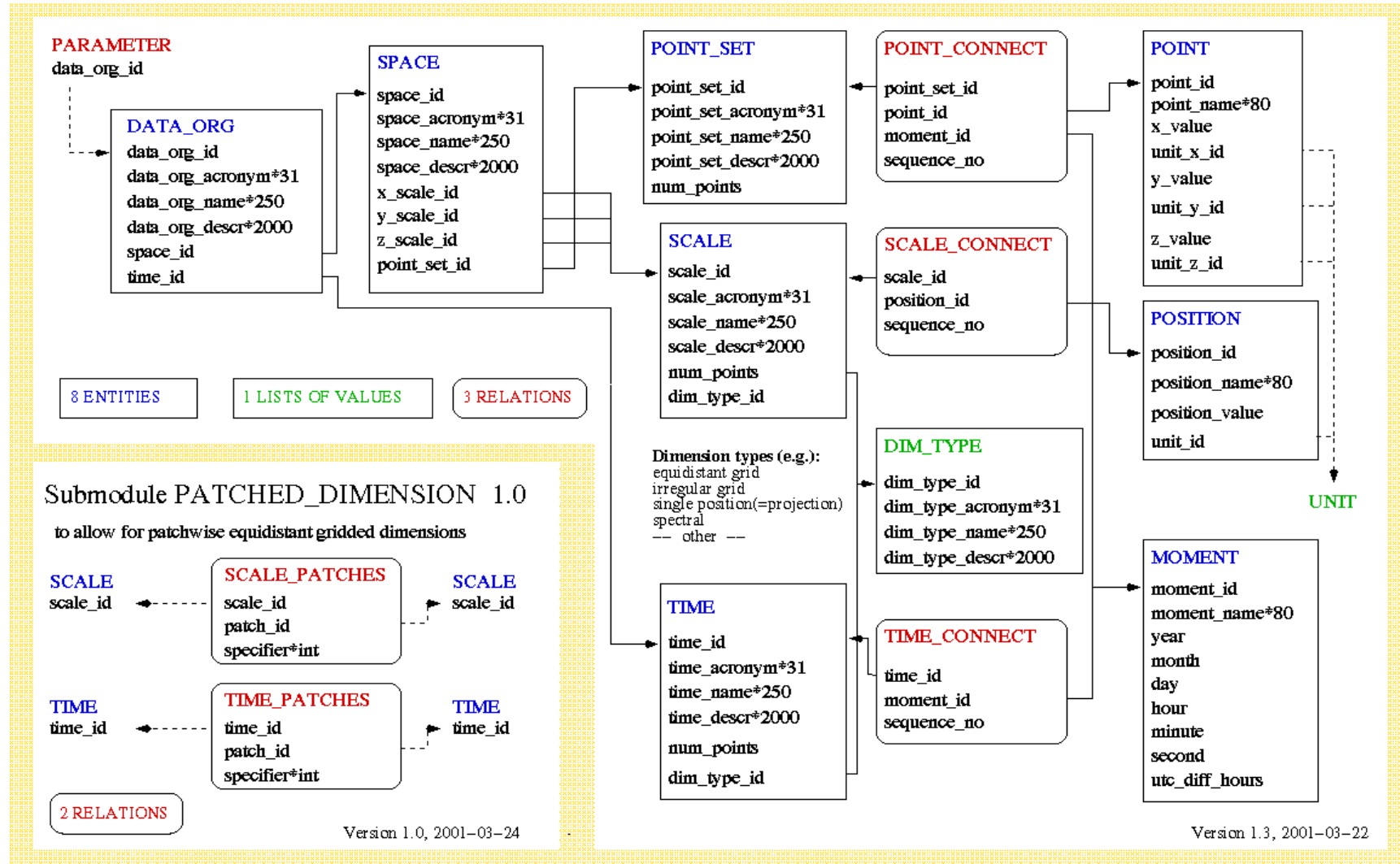


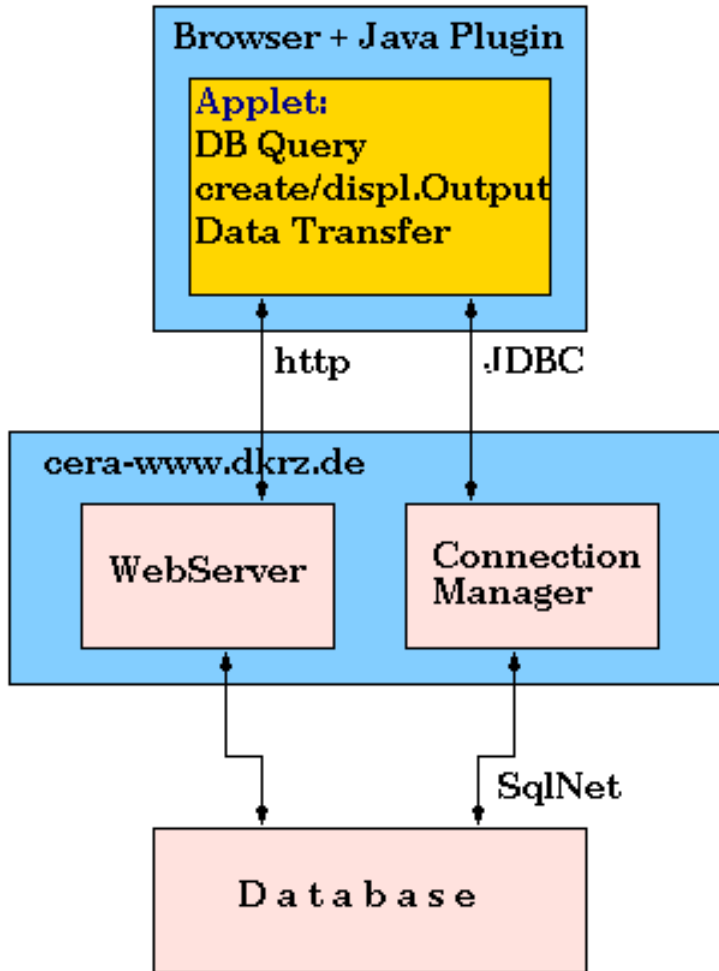
BLOCK PARAMETER



BLOCK COVERAGE

CERA Module DATA_ORGANIZATION, Version 1.3





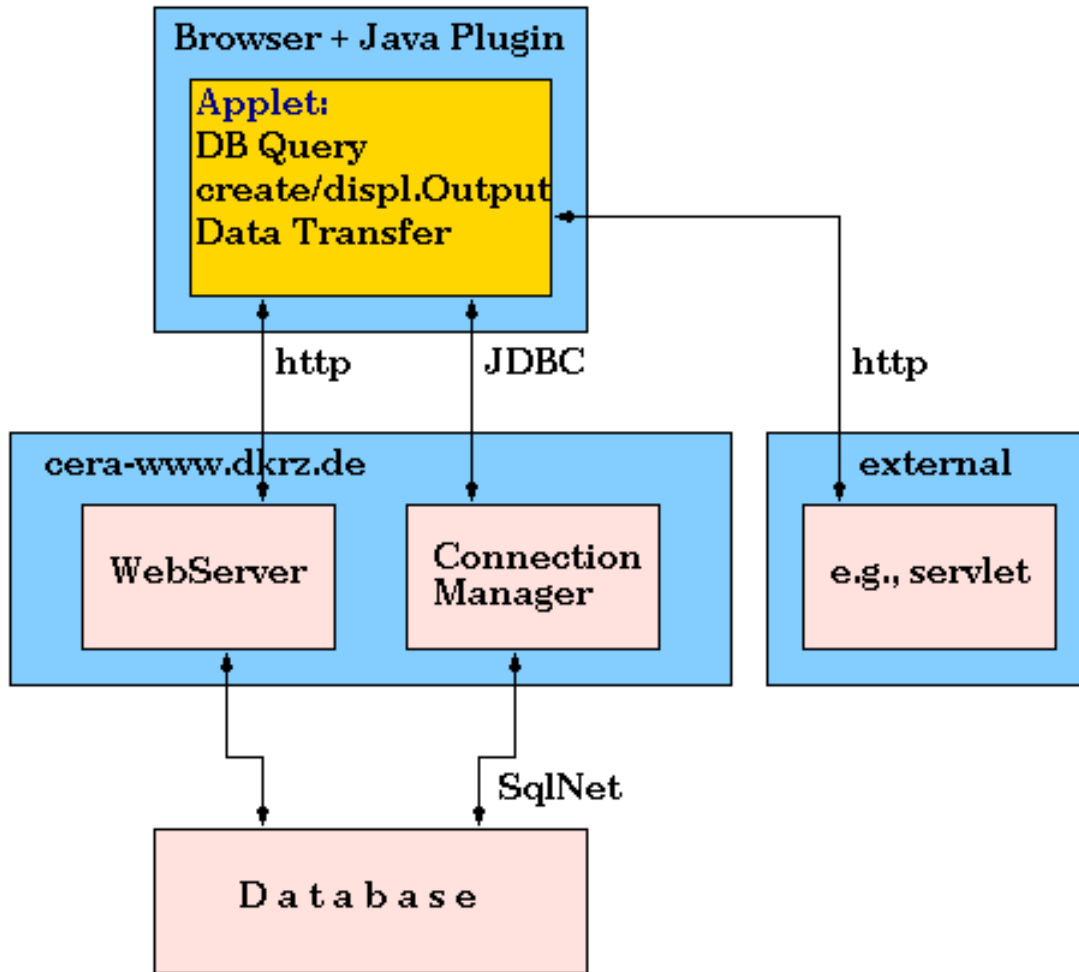
Access Client realised as web-based Java Applet.

Middleware layer provides applet and DB connection

DB-Server for catalogue operations and climate data retrieval.



Inclusion of other Data Sources



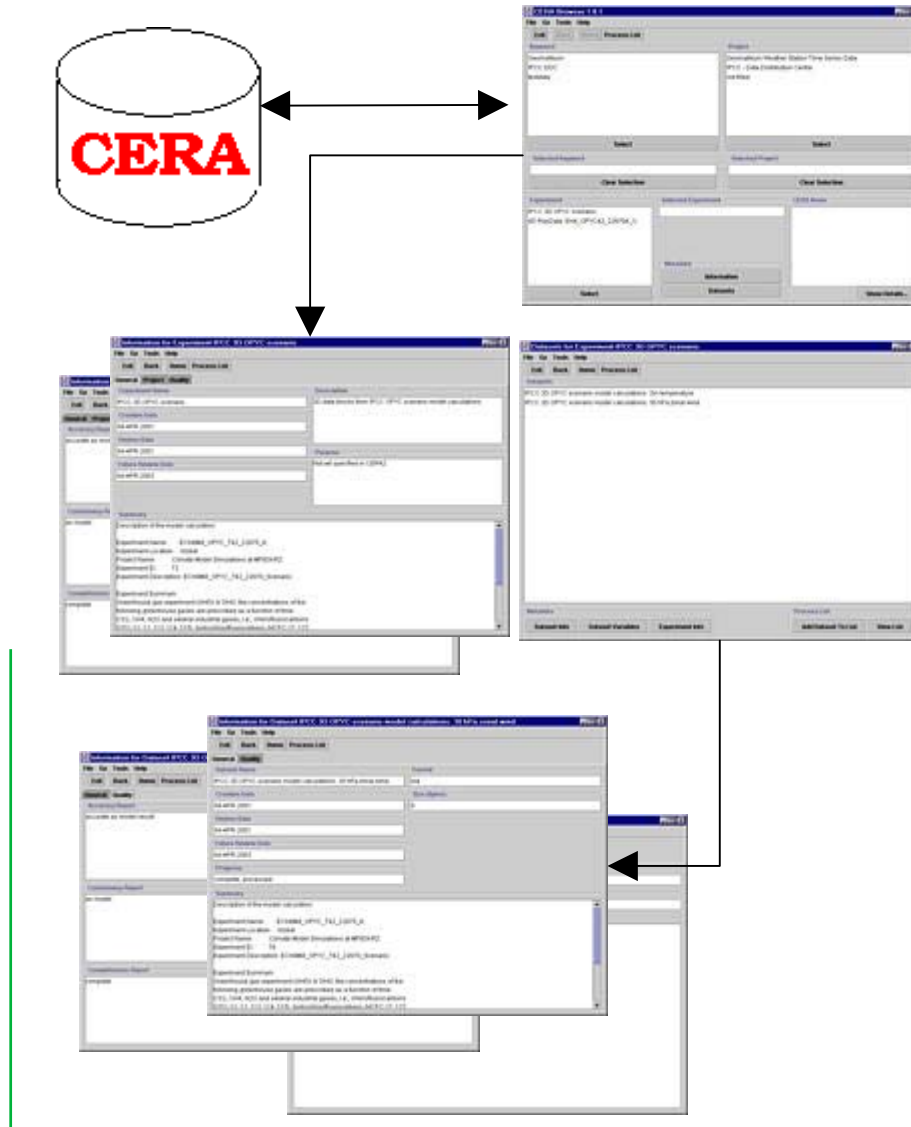
Client applet receives foreign data URI from CERA-2 DB

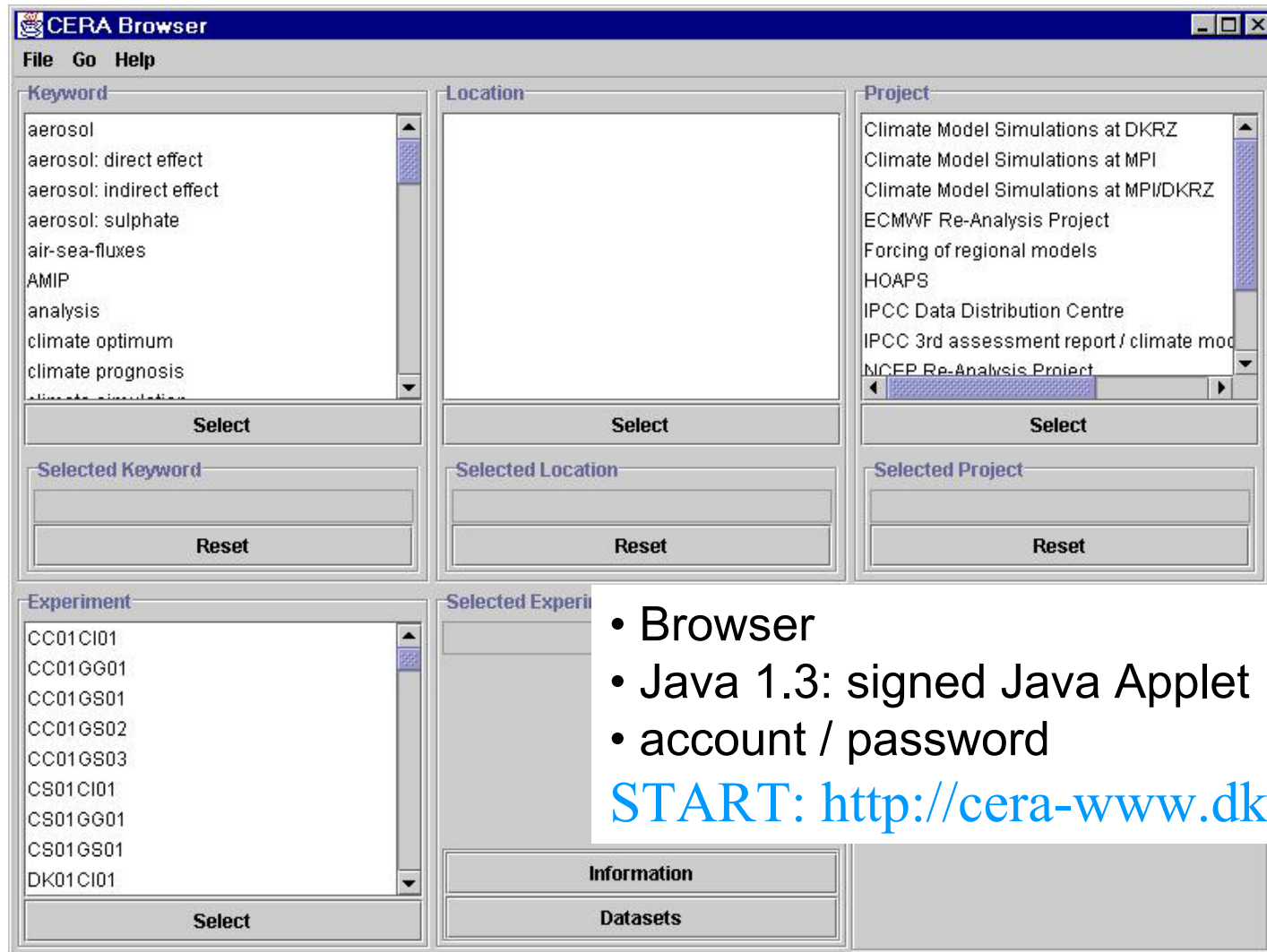
Foreign server provides DB data by http:
German Aerospace Centre



Selection via CERA meta data:

- selection of the experiment (=model run)
- display of meta data: experiment, quality, datasets
- selection of the dataset
- display of dataset information
- add datasets to “process list”
- download from tape archive to data server
- download to the client





- Browser
- Java 1.3: signed Java Applet
- account / password

START: <http://cera-www.dkrz.de/CERA/>