Web Services Data Access and Integration (WS-DAI) The Relational Realisation (WS-DAIR)

GGF11 – 15 March 2005

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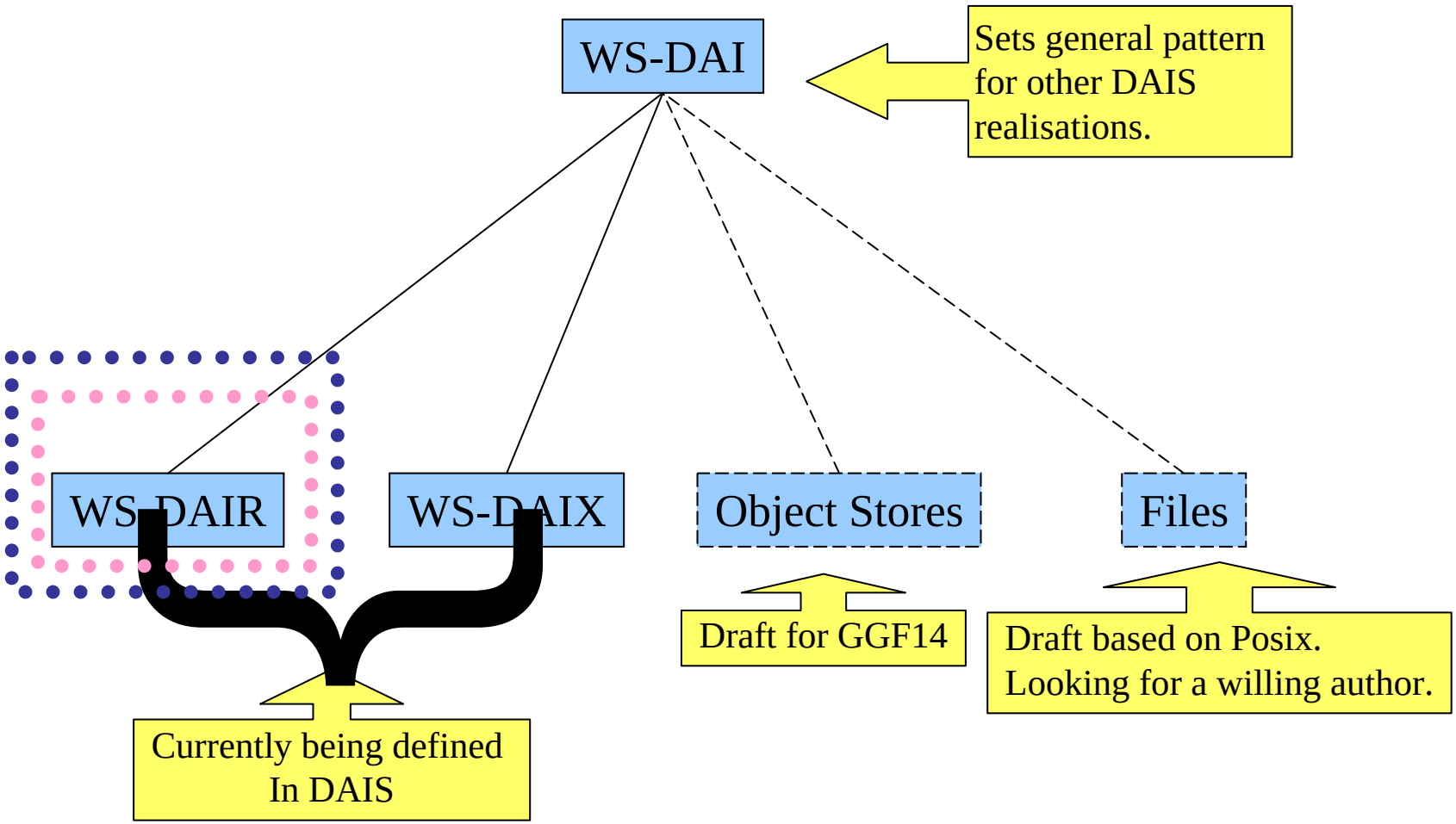
WS-DAIR – Agenda

- Introduction
- Related Standards
- Some Diagrams
- Changes from GGF12
- Outstanding Issues
- What's Next

WS-DAI Specifications



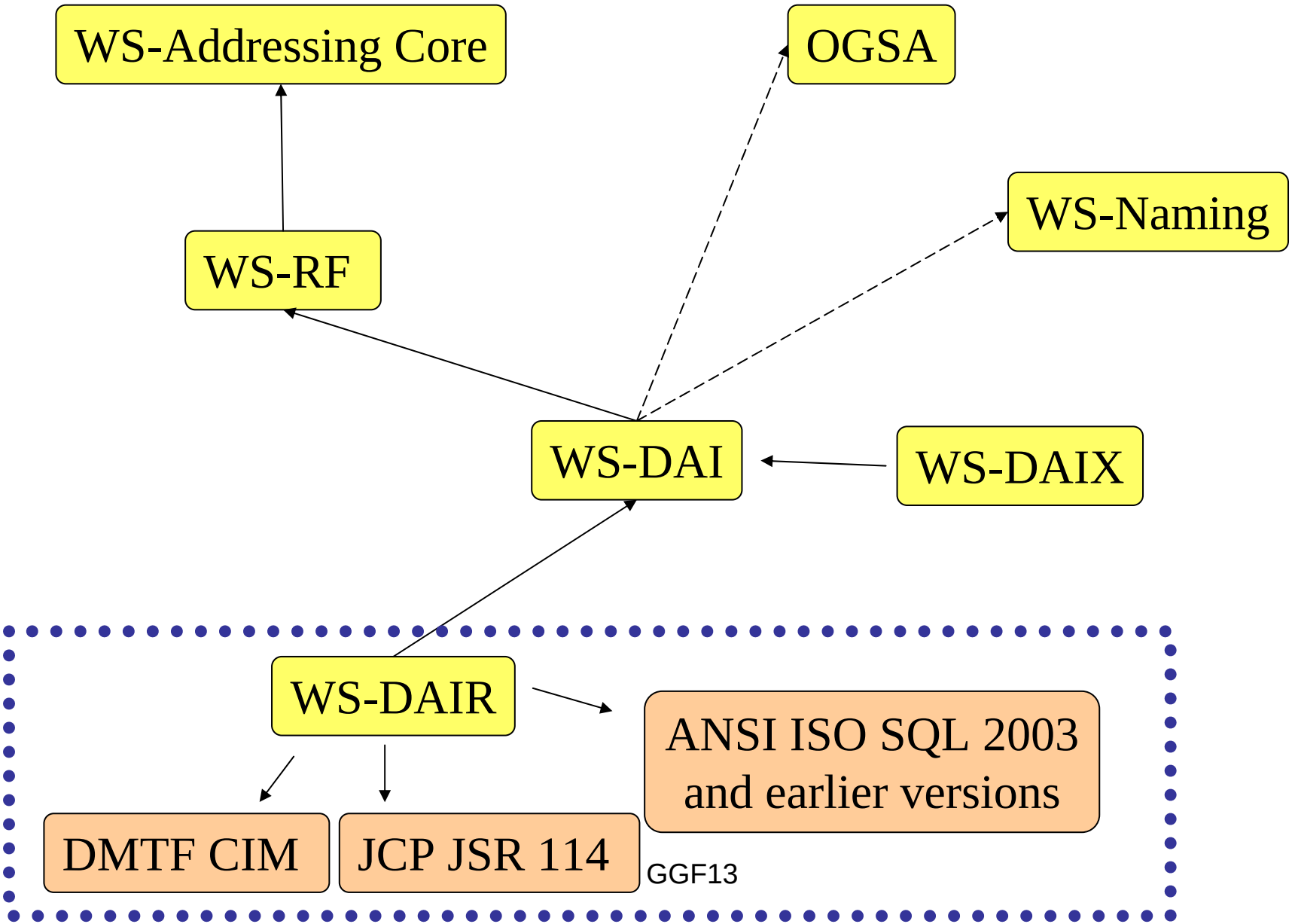
WS-DAIR Background

- WS-DAIR is a specification for a collection of data access interfaces for relational data resources,
  - It extends interfaces defined in the *Web Services Data Access and Integration* document [WS-DAI].
- The relational data resources are assumed to be composed of tabular data structures such as relations and result sets
  - The resources are accessed either using SQL queries or by row iteration.
- WS-DAIR does not provide its own query/update languages for relational data resources.
  - *WS-DAIR acts as a conduit for existing relational query and update languages to be conveyed to the appropriate data resources*

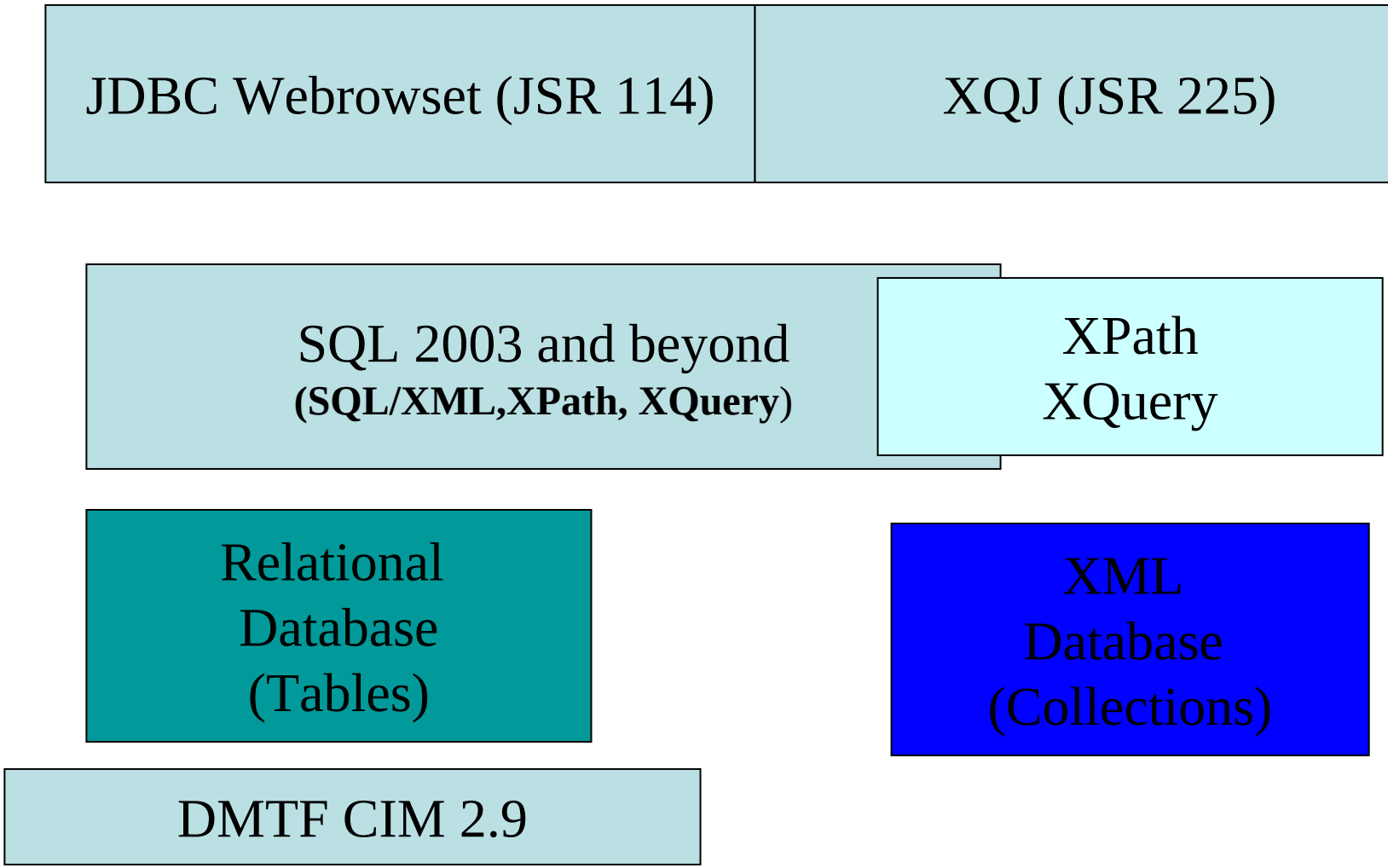
WS-DAIR Interfaces

- Three kinds of Interfaces are supported
  - DataAccess
    - *SQLAccess*: provides access to a relational data resource.
    - *SQLResponseAccess*: provides access to each type of Response that can result from the execution of a SQLExpression.
    - *SQLRowSetAccess*: provides access to a set of rows, which are usually the result of a SQLExpression containing a SELECT statement.
  - DataDescription
    - *SQLAccessDescription*
    - *SQLResponseDescription*.
    - *SQLRowSetDescription*
  - DataFactory
    - *SQLAccessFactory*: provides access to a relational data resource and generates a new data resource to hold the resulting response
    - *SQLResponseFactory*:provides access to a SQL response and generates a new data resource to hold the resulting rowset .

Bigger picture: specification dependency



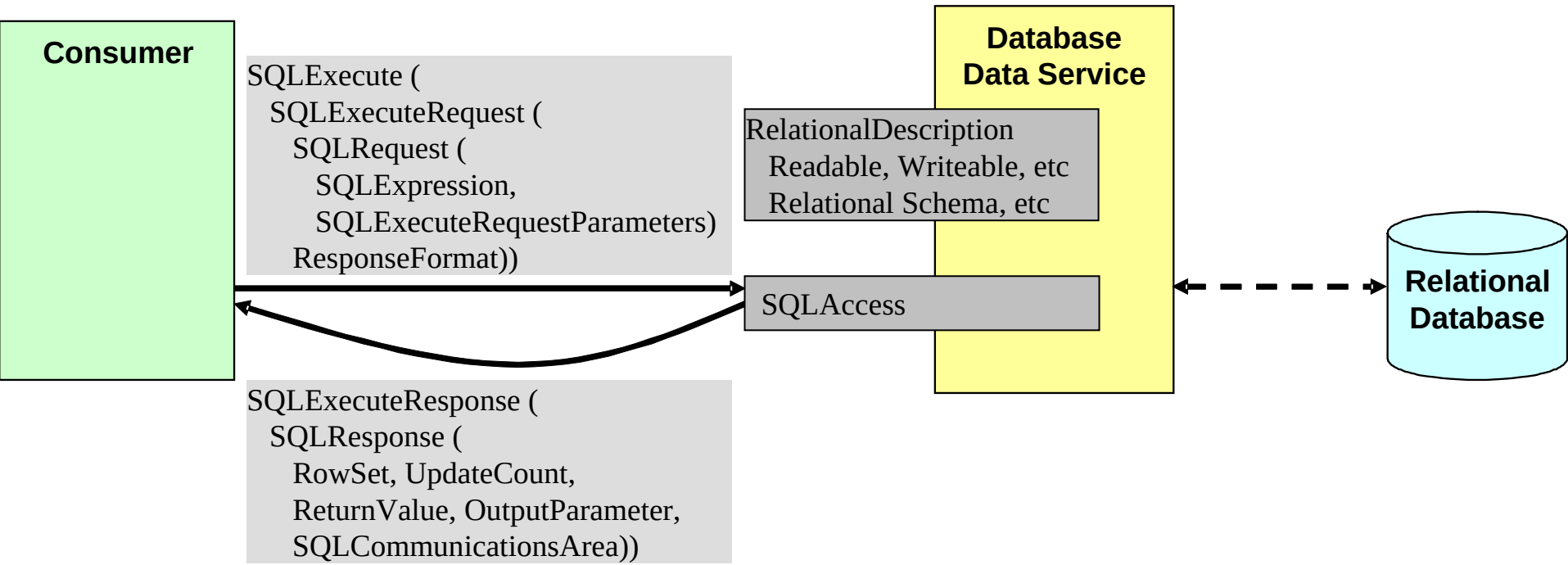
Database Standards Overview



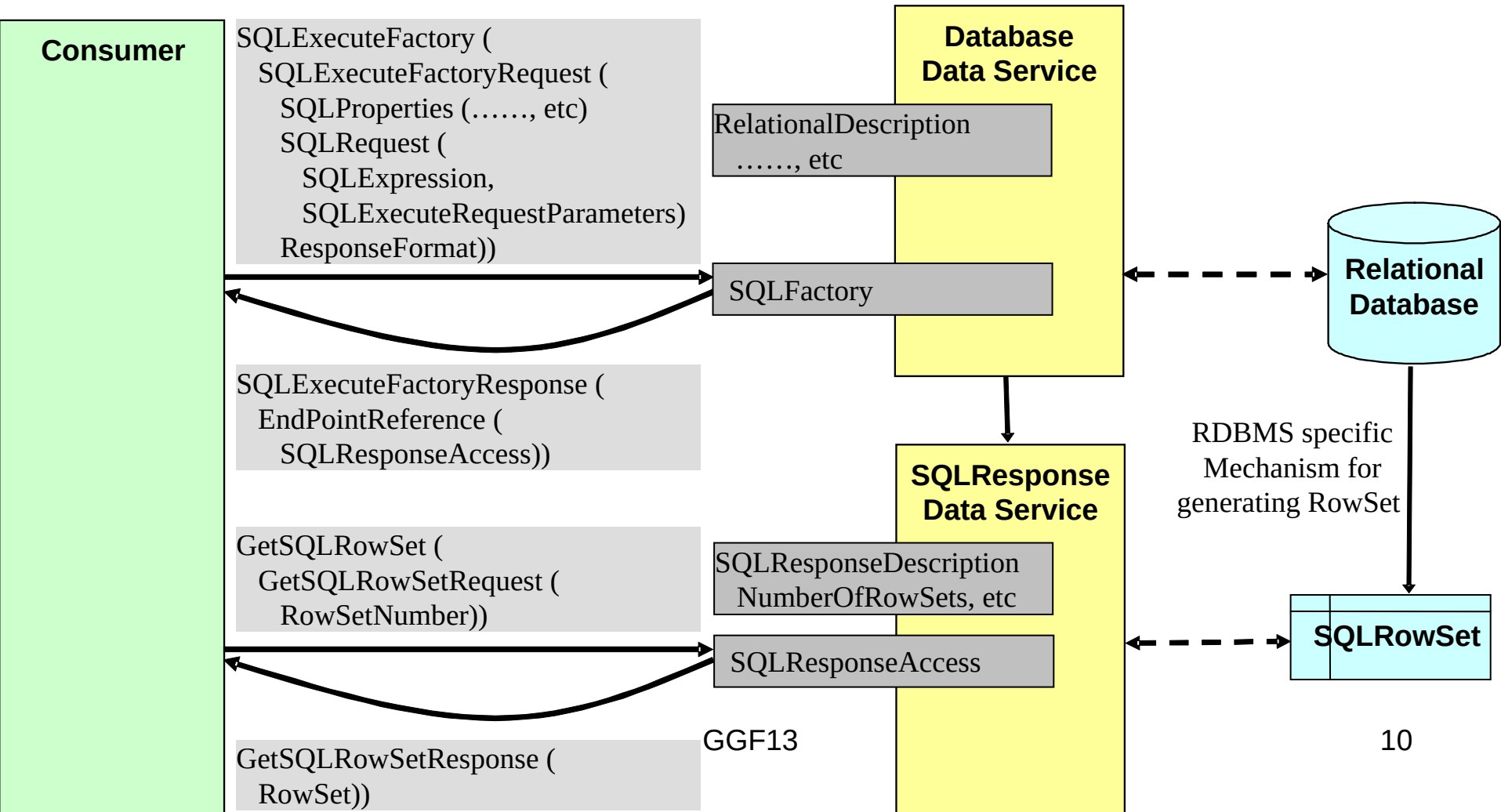
DMTF CIM and DAIS

- Collaboration between GGF and DMTF (Distributed Management Task Force)
  - Produce a UML representation of the SQL99 model the GGF (Global Grid Forum) and DMTF (Distributed Management Task Force) groups for standardization
    - The model would be used to generate the properties of the SQLAccessDescription resources
  - Produce a paper through the GGF process describing the model to handover to the DMTF
- Until GGF13 collaboration with DMTF CIM was via CGS (Common Information Model Grid Schema) working group. The work will move to DAIS-WG.
- The work will be discussed in the final CGS Session ever at 11am in Sapphire Ballroom 2 on Tuesday March 15

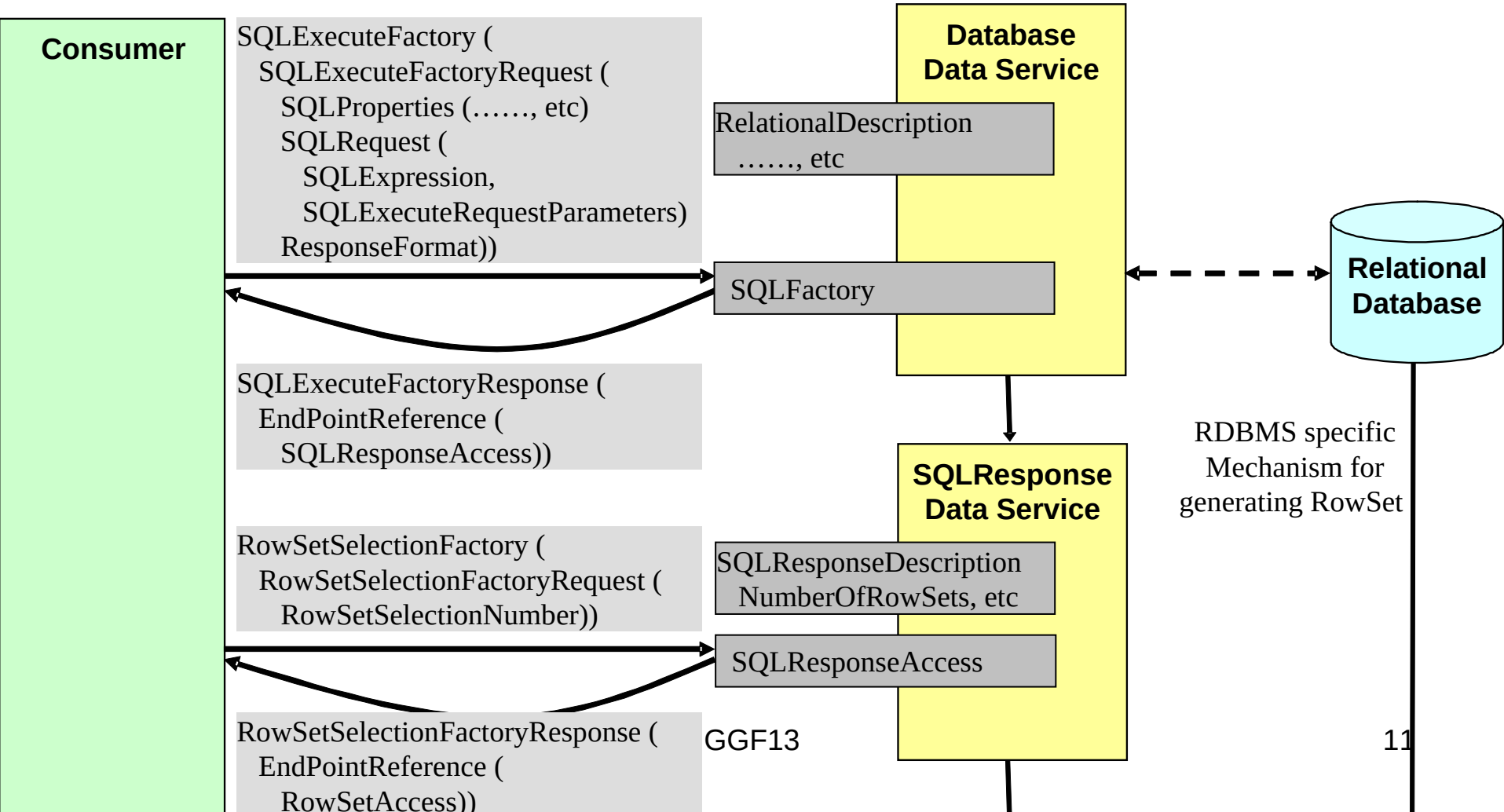
Direct Data Access Operations SQLAccess::SQLExecute



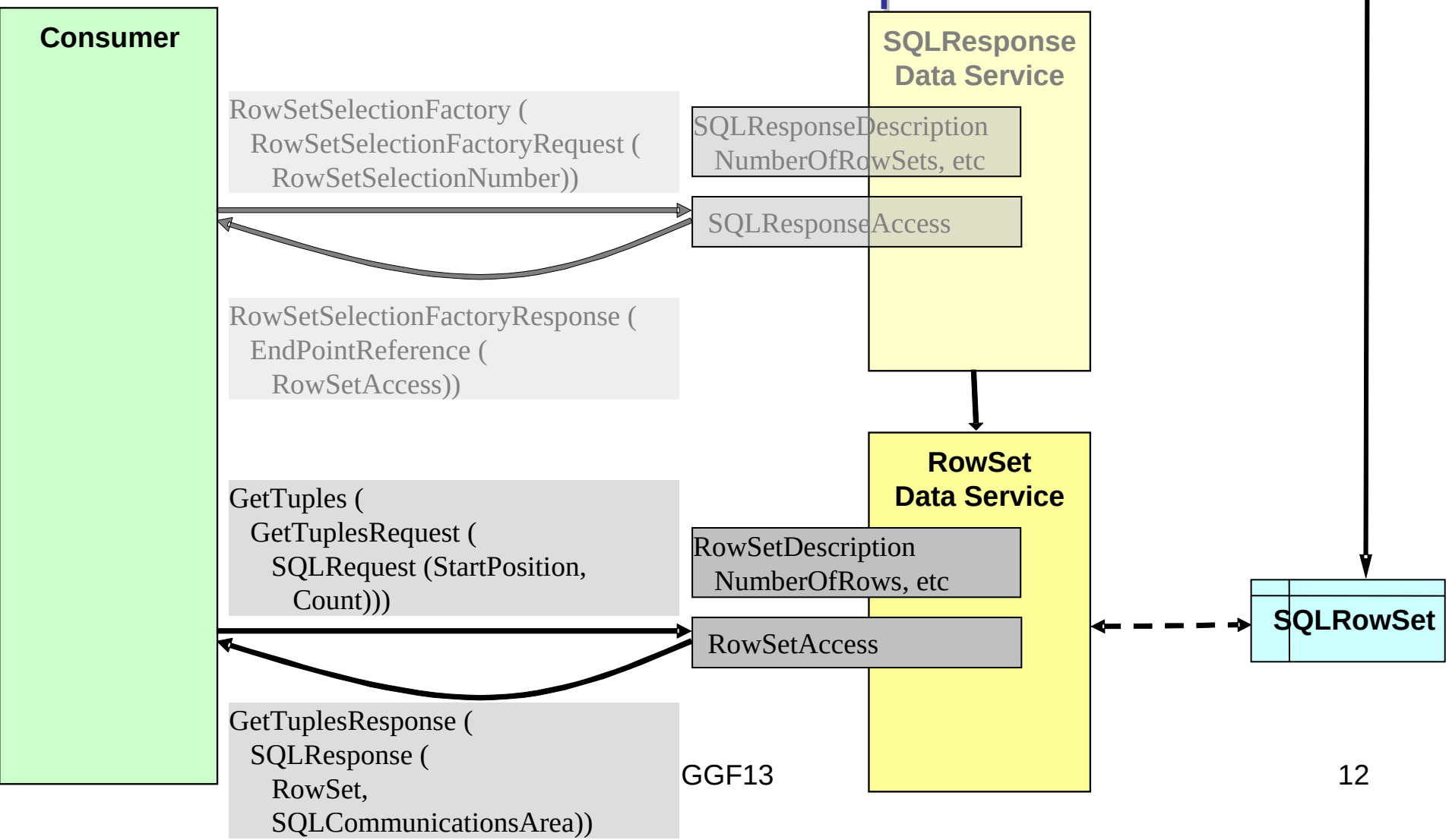
Derived Data Access Operations SQLFactory::SQLExecuteFactory SQLResponseAccess::GetRowSet



SQLFactory::SQLExecuteFactory SQLResponseAccess::RowSetSelectionFactory RowSetAccess::GetTuples – 1 of 2



SQLFactory::SQLExecuteFactory SQLResponseAccess::RowSetSelectionFactory RowSetAccess::GetTuples – 2 of 2



Outstanding Issues

- CIM model work and resource properties generation
- GridForge issues
- WSRF and WSI compatibility

What's Next

- Prepare the specification for the final draft stage for GGF14
  - Complete the CIM work for relational data:
    - Complete the model and paper
    - Incorporate the properties into the WS-DAIR specification
  - Process the grid forge issues
  - Adopt a solution that helps with WSRF and WSI compatibility
  - Modify the specifications
  - Review the specifications
- Please do join in the DAIS activity (e.g., review the CIM model for relational database) Any of these people would be delighted help you become a DAISer ☺
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