



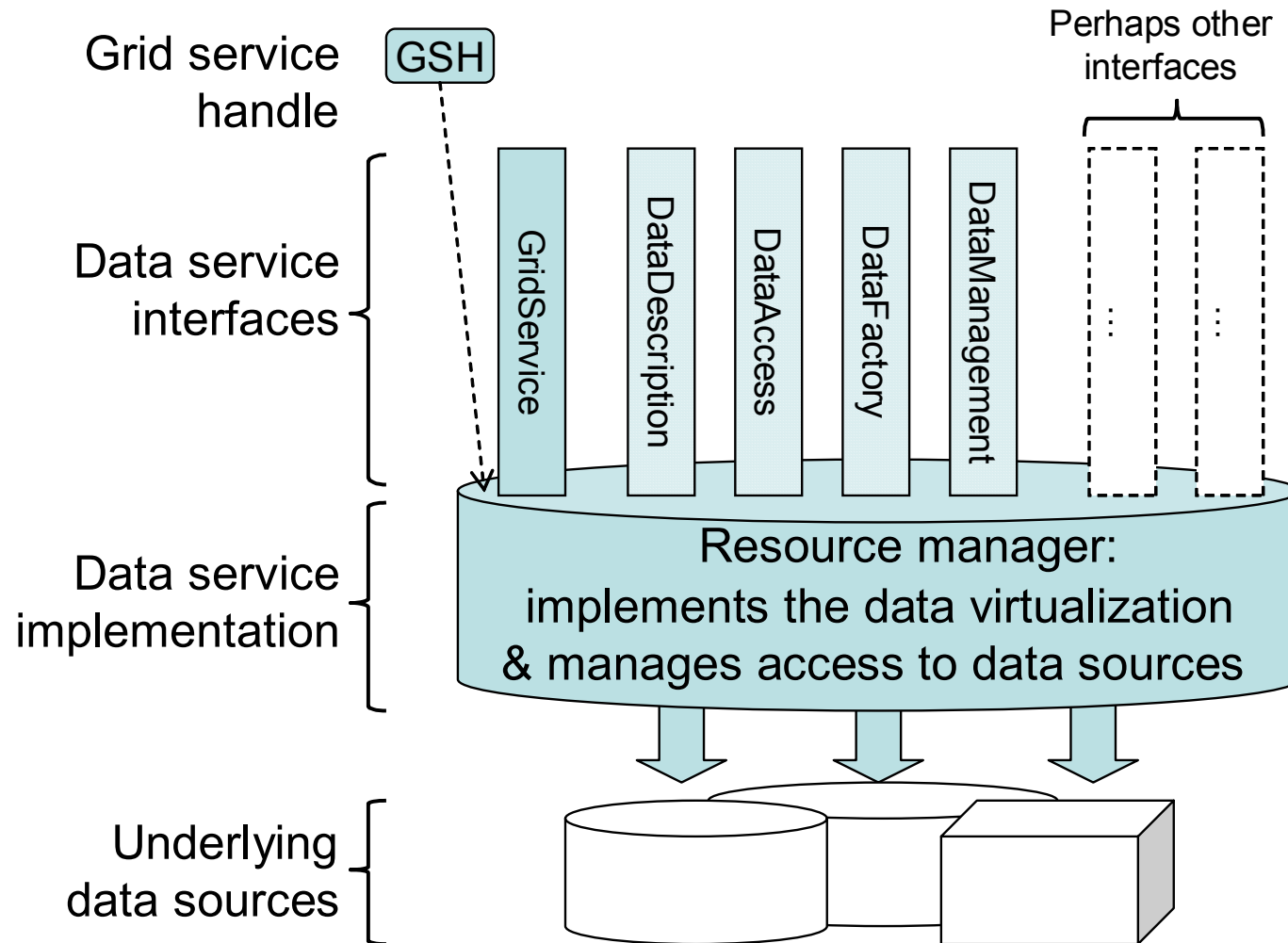
Data Services: Impact of WS-Resource Framework March 10, 2004

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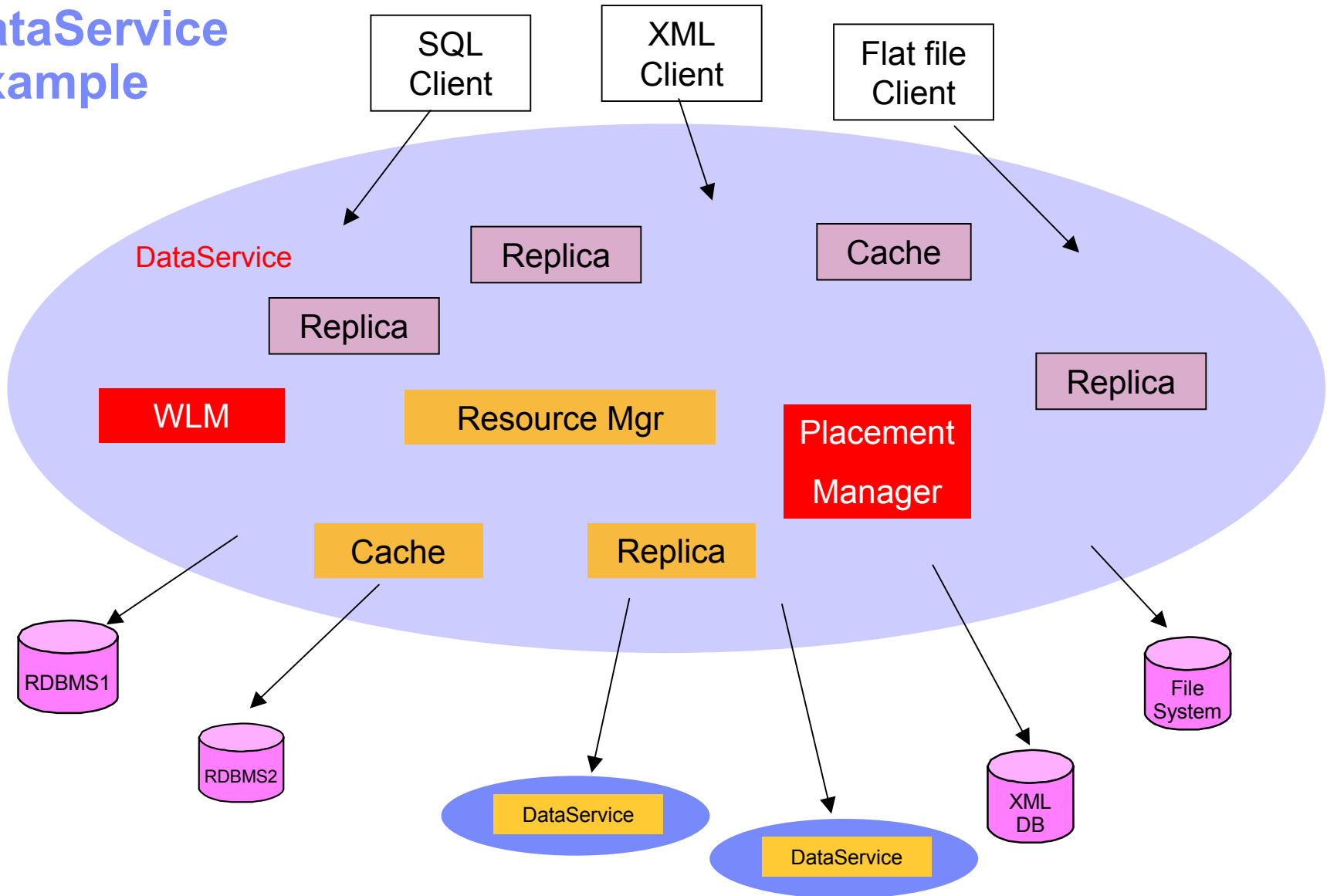
Data Service – Key Concepts

- **Virtualize Data**
 - ▶ Describes an abstract view of some data.
 - ▶ Over data resource(s) and possibly other data services
 - ▶ Providing means to access and modify data through this abstract view.
- Provides interfaces to:
 - ▶ define, modify and introspect the abstract view
 - ▶ access and modify the data via this abstract view

Data Service – Original Proposal



DataService Example



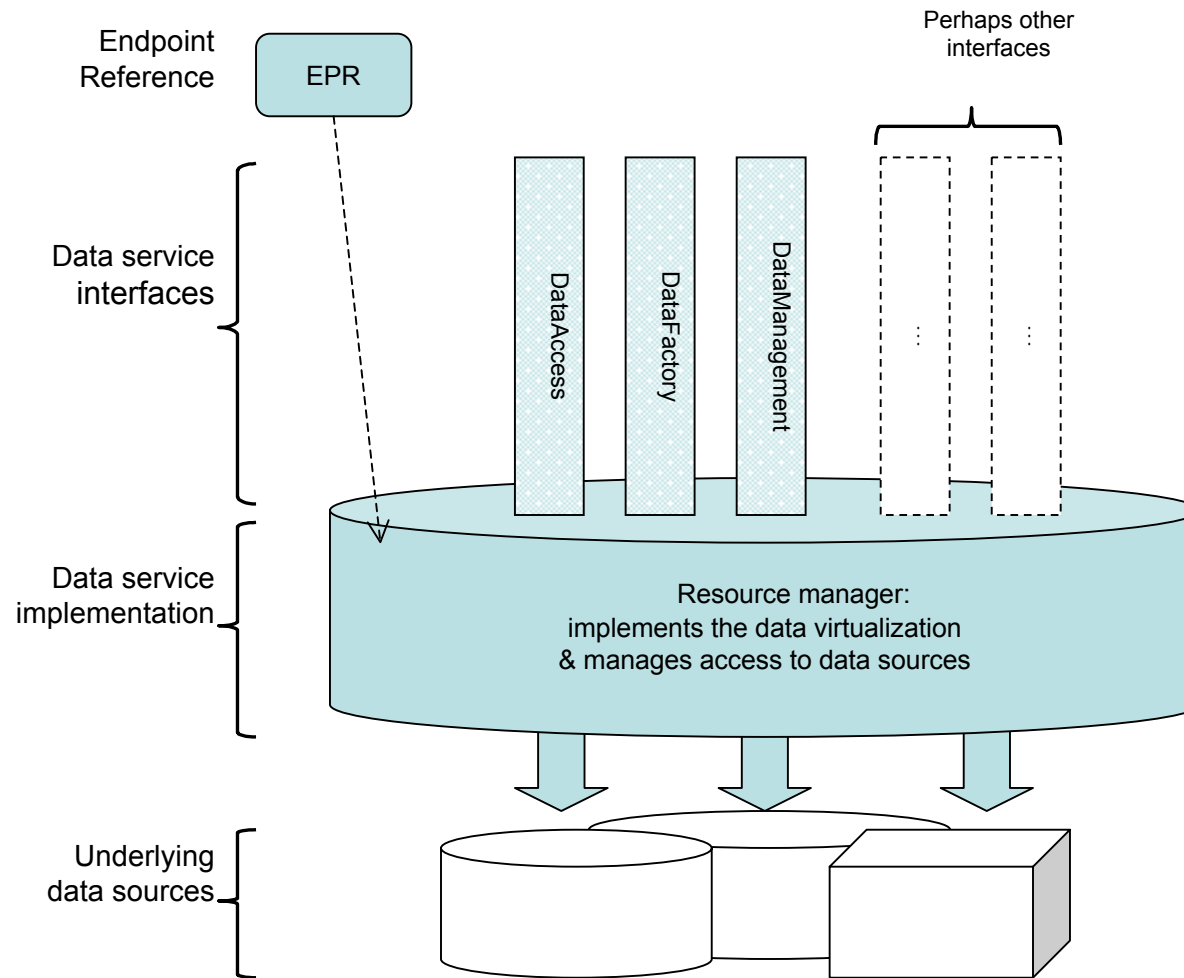
WSRF Changes

- **GSH/GSR replaced by WS-Addressing endpoint reference**
 - ▶ Optionally, WS-RenewableReference
- **DataDescription interface replaced by:**
 - ▶ operations “inherited” from WS-Resource
 - ▶ a WS-Resource Properties document
 - with TBD common elements
- **WS-Resource Properties**
 - ▶ DAIS to define common elements
 - ▶ Extensions will need to be defined, e.g., Relational, XML, File, ...
- **Lifetime management via WSRF lifetime management patterns**
 - ▶ Plus data service specific operations to control lifetime

WSRF Changes

- **DataFactory**
 - ▶ TBD
 - ▶ To follow guidelines of WS-Resource
 - ▶ Extensions/derivations from/to particular data services
- **WS-Agreement dependency**
 - ▶ Still in specification but an interim approach will be taken
- **A Data Service is:**
 - ▶ A WS-Resource compliant web service
 - ▶ That implements one or more of the 3 Data Service interfaces
 - Directly or via “extension”
 - ▶ And/or provides a WS-Resource Properties document

Data Service – in WSRF



Summary

- **WS-Resource Framework induces changes to DataServices**
- **Changes are more “syntax” than semantics**
- **Data Services still provides virtualized access to information on the grid:**
 - ▶ Provides service-based **Access** with specified QoX
 - ▶ Basis for **Integration** and **Virtualization**
 - ▶ Supports **heterogeneous, distributed** data via **open** protocols
 - ▶ Data **Placement** capabilities provided

Questions?