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OGSA-DAI & DAIT projects

Update for TAG

www.ogsadai.org.uk

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Director

www.nesc.ac.uk

30th October 2003



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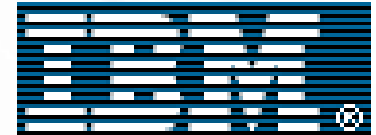


Contents



- **OGSA-DAI *Product* report**
- **OGSA-DAI *Project* report**
- **DAIT *Project* report**
- **OGSA-DAI *Product* road map**

ORACLE



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OGSA-DAI Product

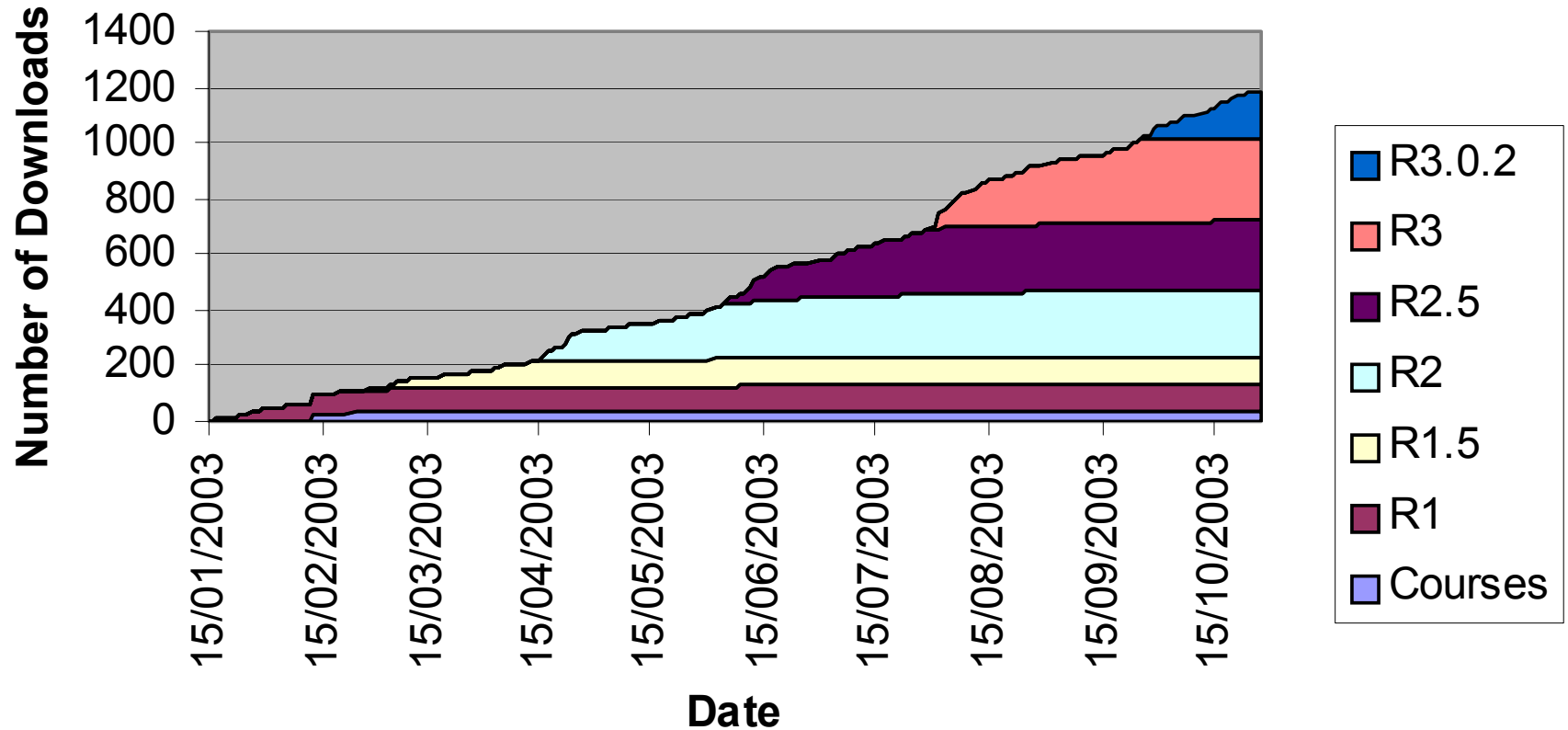
- **Brand name: OGSA-DAI**
 - Continues as established
- **Current release 3.0.2**
 - **OGSA-DAI: 1183 downloads (461 R3 & R3.0.2)**
 - ▶ >379 in UK
 - **50 downloads by users of R3.0.0 of R3.0.2 within a week**
 - **Recent performance analysis ⇒ R3.0.3 Nov 03**
 - **DQP prototype: 77 downloads**
 - ▶ Since 1st September 2003
- **Web site**
 - **471 registered users**
 - **Transfers to users gigabytes / month**
 - **Aug 1.38GB Sep 1.63GB Oct 1.81GB**





Releases & Downloads

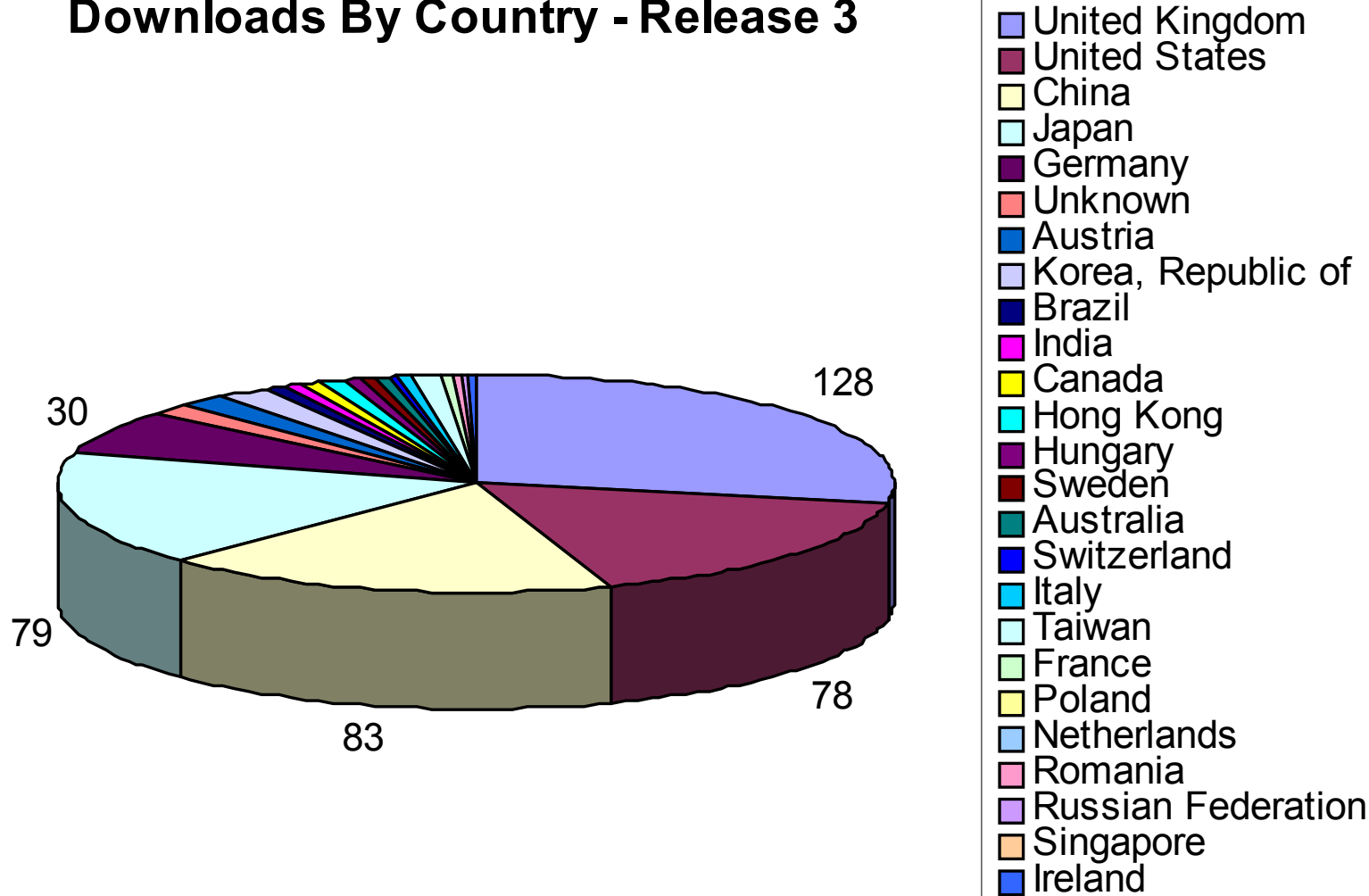
Cumulative Downloads By Time



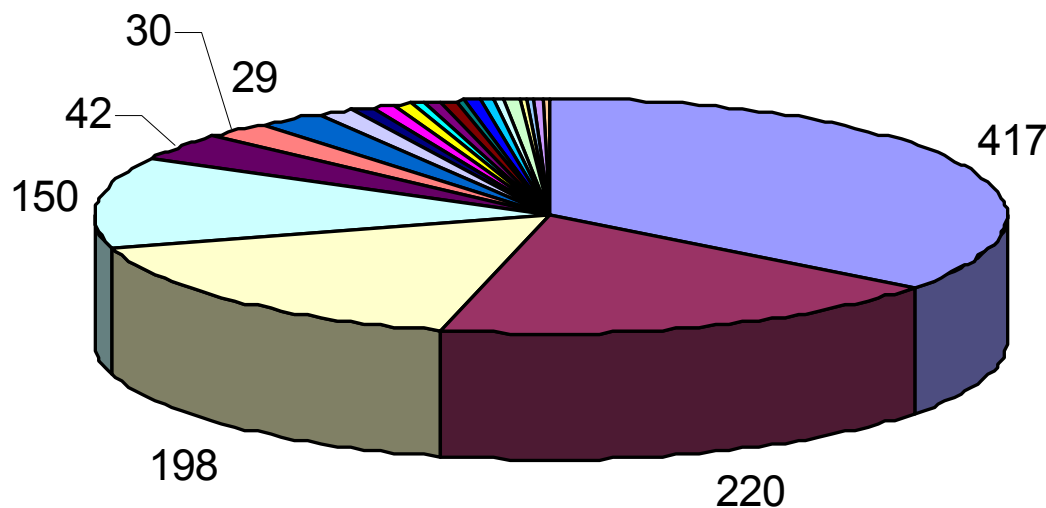


OGSA-DAI downloads

Downloads By Country - Release 3



Downloads By Country - All Releases



- United Kingdom
- United States
- China
- Japan
- Germany
- Unknown
- Austria
- Korea, Republic of
- Brazil
- India
- Canada
- Hong Kong
- Hungary
- Sweden
- Australia
- Switzerland
- Italy
- Taiwan
- France
- Poland
- Netherlands
- Romania
- Russian Federation
- Singapore
- Ireland



OGSA-DAI Project

- **EPCC Team continued to 31st Oct 03**
 - Then continues as the DAIT R&D team
- **Globus Alliance Formed**
 - **Edinburgh, PDC, Chicago University & University of Southern California**
 - ▶ 1 Sept 03
 - **Collaboration meetings**
 - ▶ Agreeing schedule, standards, procedures for OGSA-DAI ↔ GT3.4 source integration
- **GGF DAIS WG – major investment – UK led**
 - 3 face-2-face meetings, > weekly telcons & authoring for GGF9
- **ODD-Gene Demo**
 - <http://www.epcc.ed.ac.uk/~oddgenes/>



DAIT Project

- **Product / Brand remains: OGSA-DAI**
- **Planning meeting at NeSI 20th October**
 - **ESNW, IBM & NEReSC by Access Grid**
 - **4 Papers produced**

▶ Release 4 (April 04) Specification	Public after
▶ OGSA-DAI road map	PB 5 th Nov 03
▶ Project management structure revision	PB 5 th Nov 03
▶ Draft research plan	January 04
- **DAIT Contract Status**
 - **Completed EPSRC forms submitted to DTI**
 - **No information yet on how to proceed contractually**
 - ▶ No comfort letters
 - ▶ We *urgently* need contracts



DAIT Project Status

- **Partners formally proceeding from 1 Oct. 03**
 - **EPCC charging from 1st November 03**
 - ▶ Team currently continues unchanged – **working well**
 - **NeSC PDRA not yet advertised**
 - **ESNW PDRA appointed on *other* funds**
 - **NEReSC PDRA not yet advertised**
 - **IBM financial planning processes underway**
 - ▶ Expectation of engagement continuing
 - ▶ But not yet formally agreed or quantified
 - **ORACLE will remain active in standards**
- **Project transition meeting OGSA-DAI → DAIT**
 - **25th November 2003**



OGSA-DAI road map 1

- **R3.1.0 Jan 04 Tech. Preview part of R4**
- **User Group: inaugural meeting Q1 04**
- **R4.0.0 April 04**
 - **Performance & monitoring**
 - **Additional DBMS's supported**
 - **Additional SQL supported**
 - **DBMS management operations**
 - ▶ archive, restore, bulk load
 - **File access**
 - **Client libraries**
 - **Installation wizard**
 - **User support, courses, training material, performance report**



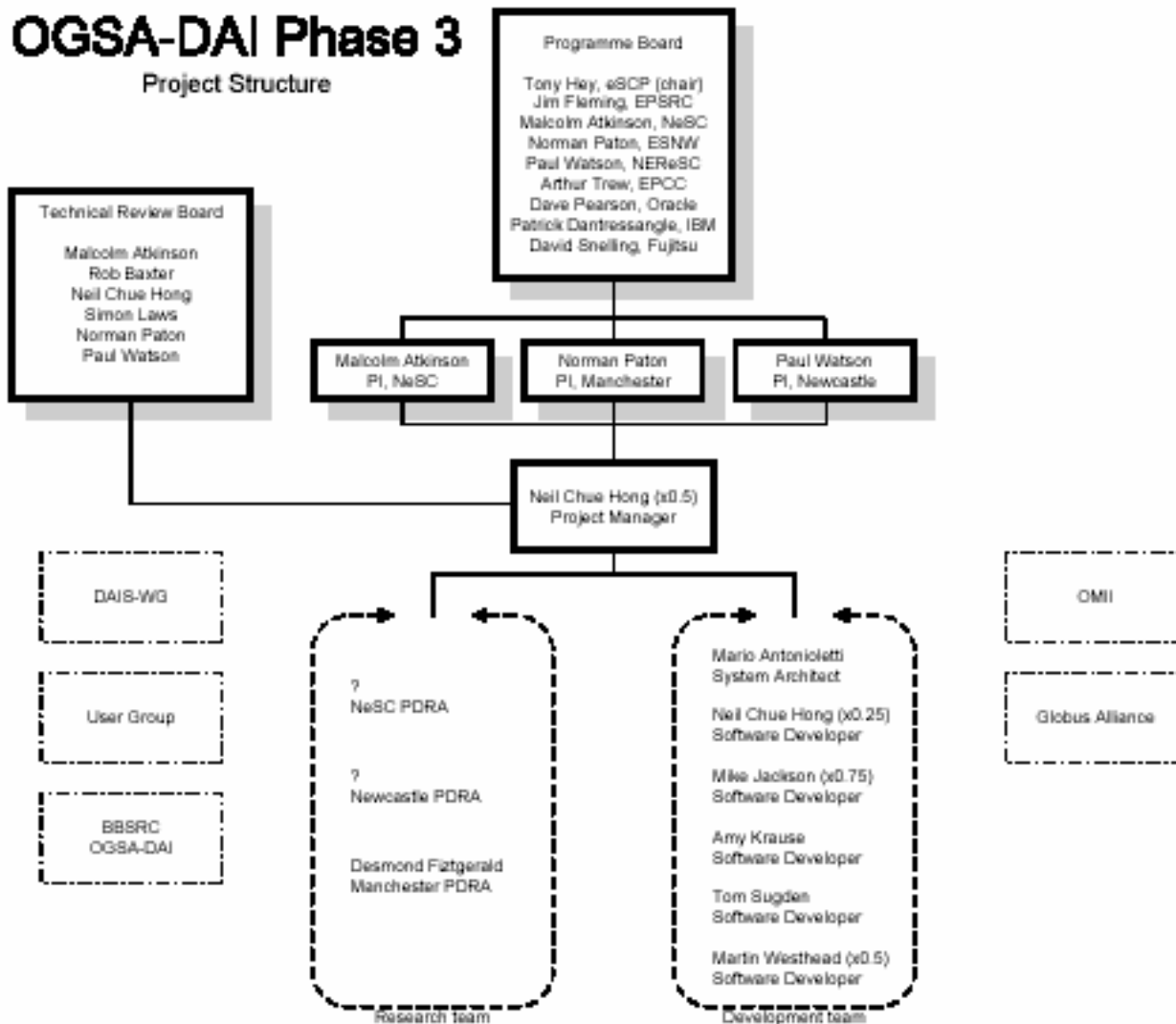
OGSA-DAI road map 2

- **R5 October 04**
 - Compliance with DAIS standards proposal
 - Distributed Relational Query Processing
 - Improved dependability and security integration
 - Extended & integrated XML and relational facilities
 - Distributed transaction participation
 - Coordinated OGSA-DAI contributor community
- **R6 April 05**
 - Integrated with GT3
 - New facilities depend on user priorities, context and research
 - OGSA-DAI components from contributor community
- **R7 October 05**
 - Maintainable release for the user community

Preliminary Organisation

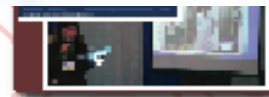
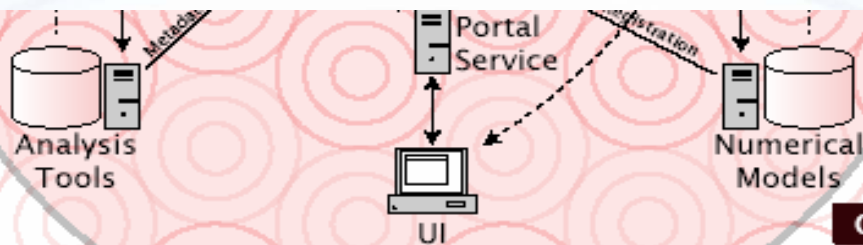
OGSA-DAI Phase 3

Project Structure





automatically store data into database. MEG is a device which can detect the change in minute magnetic fields generated from the brain activity.



Design Strategy

Resources of neuroinformatics such as data, tools and models are located in various research institutes. We focus on metadata-driven access and service oriented grid environment as key technologies for organic linking of various resources.

OGSA-DAI

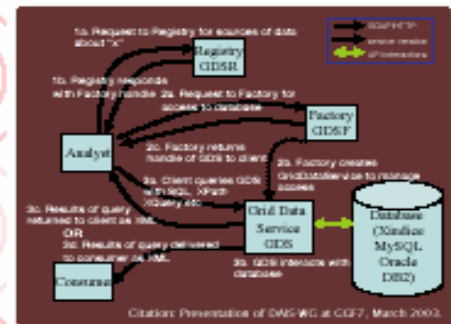
OGSA-DAI, which is under development at DAIS (Data Access and Integration Service) WG in GGF, provides a uniform framework for access to databases on the Grid. This tool enables us to use conventional SQL statement and XML search language such as XPath without any extra modification. We envision that OGSA-DAI will be adopted in many domains involving grid and DBs.

Metadata-driven access

Metadata takes a central role in our framework. All the data, tools and models are explained with metadata formatted as XML document. Users' requests for computation are processed by Portal Service, which retrieves information about appropriate resources and organizes them.

Service-oriented grid environment

In widely distributed grid environment, data and metadata should be provided through commonly accepted interfaces. Currently we are examining Globus Toolkit 3 and OGSA-DAI in terms of their functionality, working speed and so on.



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biogrid project
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Take Home Message

- **OGSA-DAI is the retained *product* brand**
 - There is growing user community engagement
 - And evidence of use
- **The OGSA-DAI \Rightarrow DAIT *project* transition**
 - Slightly delayed
 - Uncertainties about contracts & industry remain
- **But work on the *product* and standards**
 - Continues at a steady pace
 - With enhancements being delivered to users
- **Support (part of GSC) is vital**



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Comments & Questions

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Data Services

- **GGF Data Access and Integration Svcs (DAIS)**
 - **OGSI-compliant interfaces to access relational and XML databases**
 - **Needs to be generalized to encompass other data sources (see next slide...)**
- **Generalized DAIS becomes the foundation for:**
 - **Replication: Data located in multiple locations**
 - **Federation: Composition of multiple sources**





"OGSA Data Services" (Foster, Tuecke, Unger, eds.)

- **Describes conceptual model for representing all manner of data sources as Web services**
 - **Database, filesystems, devices, programs, ...**
 - **Integrates WS-Agreement**
- **Data service is an OGSF-compliant Web service that implements one or more of base data interfaces:**
 - **DataDescription, DataAccess, DataFactory, DataManagement**
 - **These would be extended and combined for specific domains including DAIS**

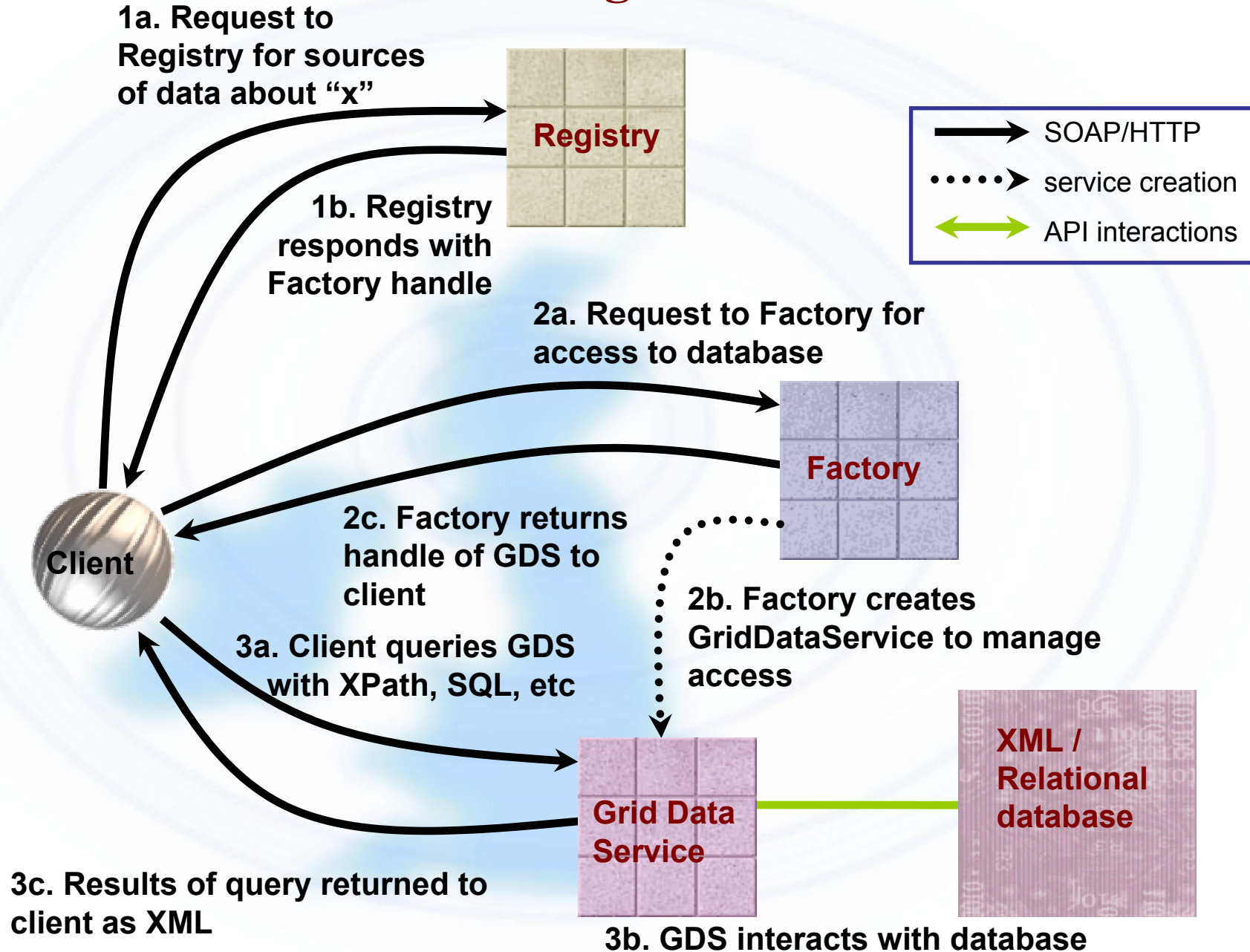




OGSA-DAI Approach

- **Reuse existing technologies and standards**
 - OGSA, Query languages, Java, transport
- **Build portTypes and services which will enable:**
 - controlled exposure of heterogenous data resources on an OGSI-compliant grid
 - access to these resource via common interfaces using existing underlying query mechanisms
 - (ultimately) data integration across distributed data resources
- **OGSA-DAI (the software) seeks to be a reference implementation of the GGF DAIS WG standard**
 - Can't keep up with frequent standard changes, so software releases track specific drafts
- **See <http://www.ogsadai.org.uk/> for details.**

Data Access & Integration Services





Third Party Delivery

