

Accessing Planetary data with EPN-TAP

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Data Scope :

- **Databases produced by various work packages during the Europlanet program**
- **Space borne data from planetary missions (PSA)**
- **Databases and tools related to participants of the EPN/IDIS (GhoSST, AMDA, SSODnet)**
- **Big data repositories including Planetary Science data (the ESO and HST archives)**
- **Data sets directly published in a compliant form by data providers**
- **External data provider including observational data derived from space missions or ground-based telescopes, but also reference data acquired in the laboratory and simulations**

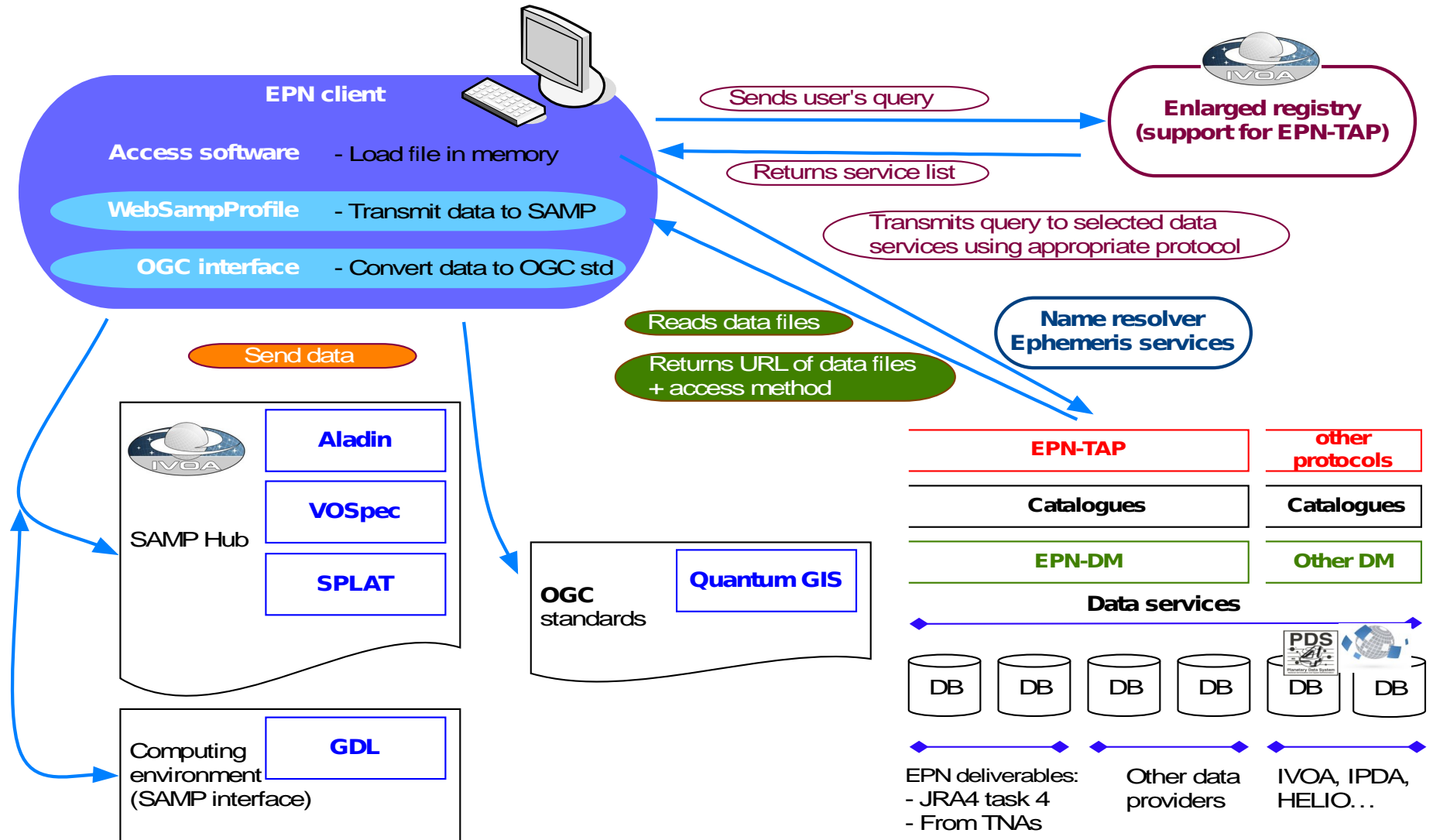
Aim of EPN-TAP

- **Facilitate searches in big archives**
- **Solution to specific complexity of Planetary Science (measurement types and coordinate frames)**
- **On-line data access and visualization possible**
- **Allow small data providers to share their data in an interoperable environment with minimum effort**

VO data access protocol for planetary data

- **Based on TAP, queries in ADQL**
- **Core data model : EPN-CORE very close from obs-core**
- **Exchanged data : VOTable**
- **Uses publication tools (DaCHS, VO-Dance)**
- **Uses a full-searchable registry from VOPDC to get all EPN services**
- **Makes queries to every EPN services and gets the results**
- **Able to query services out of the registry (url + schema)**

EPN-TAP Architecture



- **Initial developement by I. Zolotukhin**
- **Server in Python 2 + Django**
- **5 currently registered services (Exoplanet, Titan, BDIP, APIS, NASA dust catalogue from INAF-IAPS)**
- **Display tables with previews**
- **No data loaded (except preview), just URL**
- **Send data URL with SAMP protocol using samp.js library (M. Taylor)**
- **Name resolver from IMCCE (J. Berthier, J. Normand)/SSODnet, usefull for aliases**

- **Look for new data providers**
- **Convert the data from PDS to FITS whenever required**
- **Display all services results together in the client**
- **Add a quick query field**
- **Validator for EPN resources**
- **Use it as a portal to access other planetary services**