



Testbed Discussion

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Testbeds

- Information technology projects require a testbed approach
 - requirements may not be sufficiently well understood
 - technology moves too fast for detailed requirement gathering
- Approach
 - build a little, test a little, end-to-end systems
 - iterative process of refining requirements
 - natural entry points for new technology



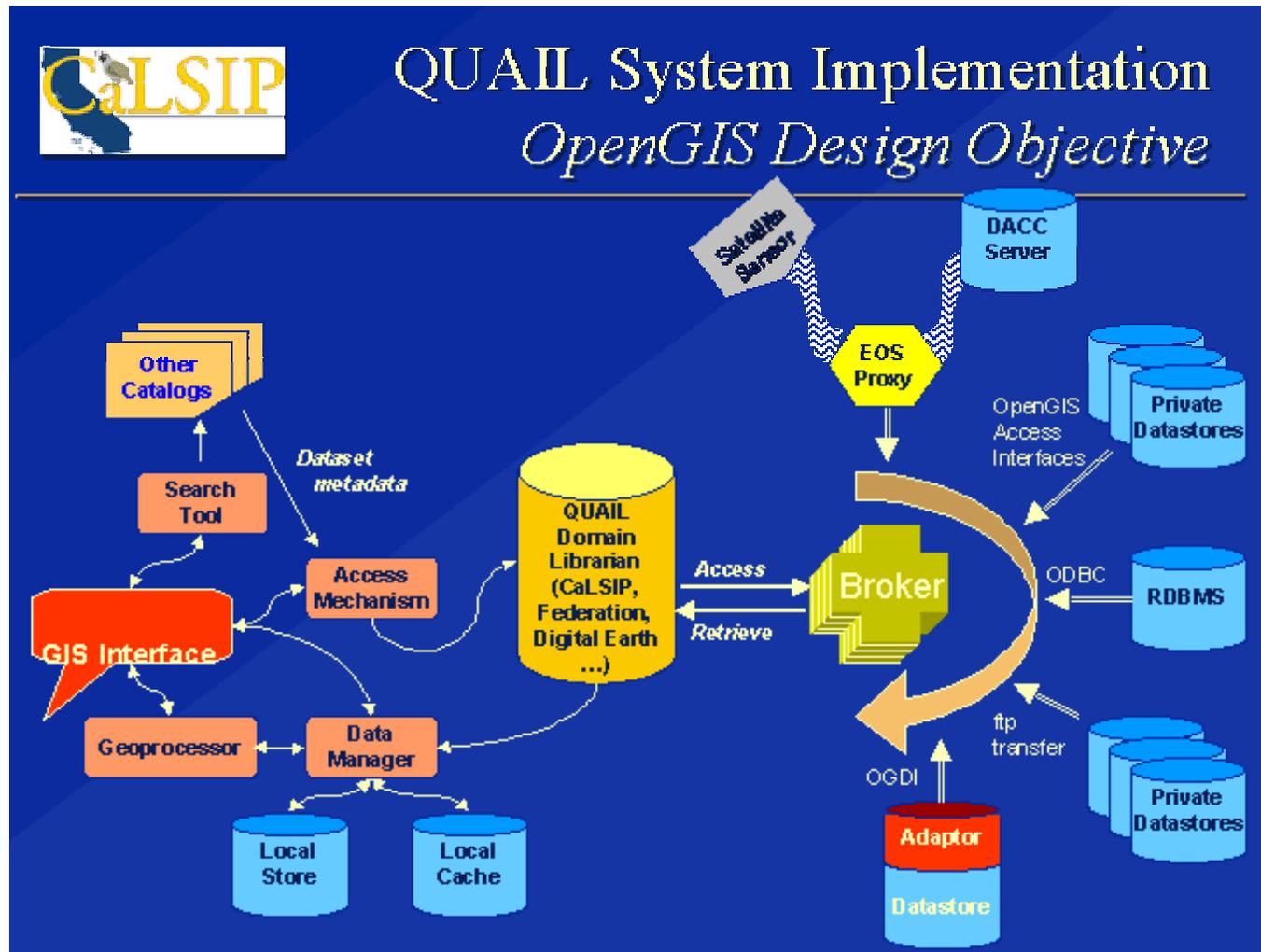
ESIP Challenges

- Define a new, workable "DAAC" interface.
- Augment the existing data catalogs with a **distributed database with user authentication, charging and data discovery.**
- Employ intelligent agents to simplify data query and return "answers" to ESIP users.
- Implementation of existing protocols are weak when manipulating ESE data types.

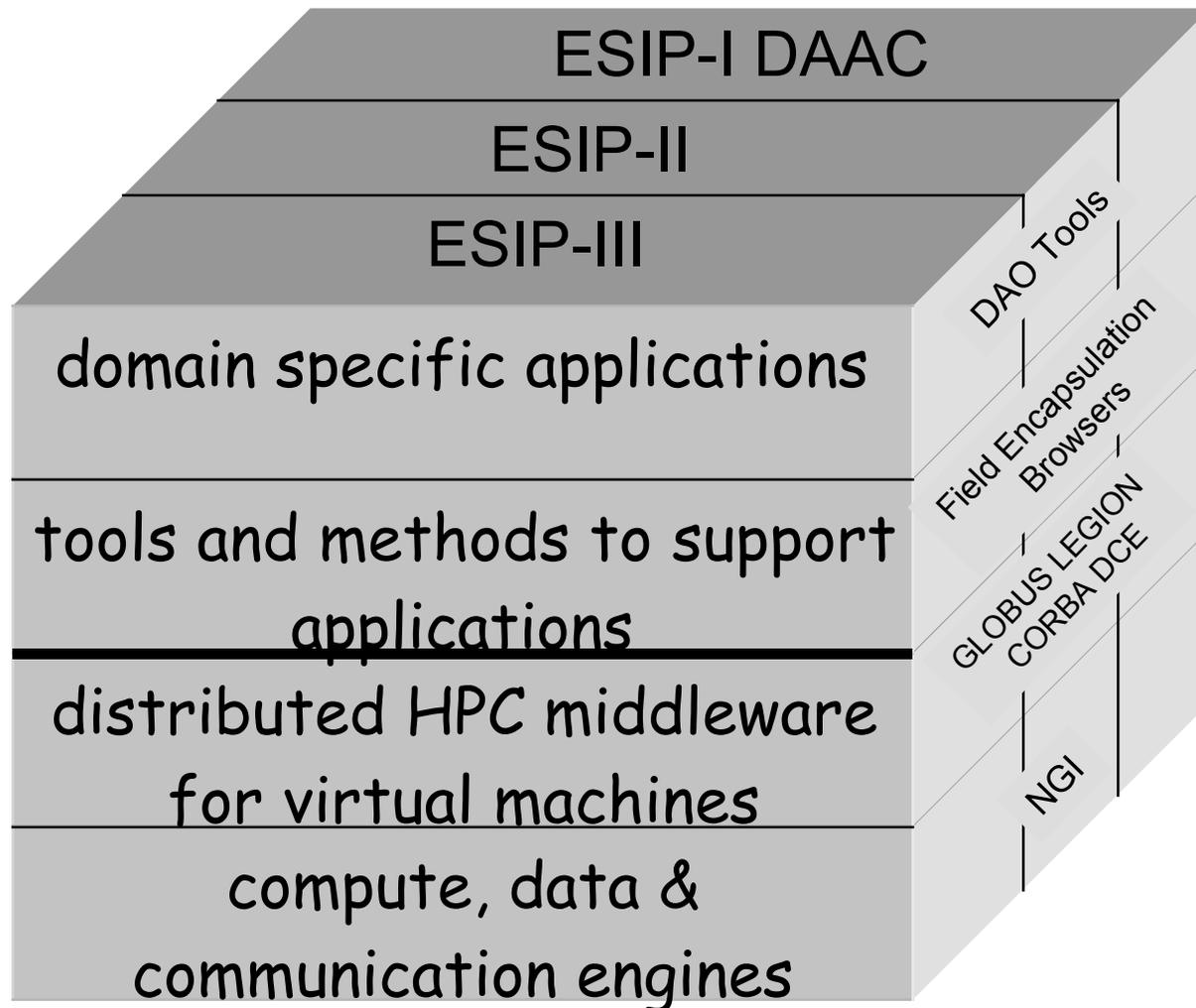


- Open GIS (Geographic Information System) Database Interface

Query Understanding and Analysis Information on the Landscape



ESE layered framework



Testbeds require systems approach

- End-to-End, Top-to-Bottom
- Postulate: ESE mission requires a distributed high performance compute/data/comm infrastructure
- Current and past interactions
 - HPCC/ESS, Earth and Space Sciences
 - advised EOSDIS on architecture
 - built the compute infrastructure of the DAO



Next Steps?

A proposal

- Some selected end-to-end testbeds
 - DAO
 - CaLSIP
 - DAAC
 - Other Code Y stressing applications?
- Supported by a top-to-bottom distributed High Performance Computing testbed TDC

