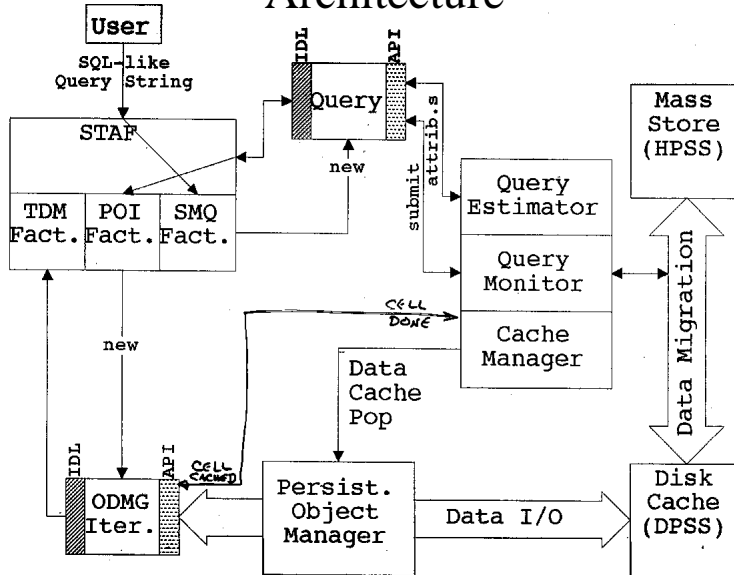


STAF & ODMG

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Architecture



Query IDL

Meeting to define GC component interfaces.
Time: 19aug97 -- 10:30am-12:30pm
Attending: Henrik Nordberg, Doron Rotem, Arie Shoshani, Craig Tull

```
interface queryI {  
  // ATTRIBUTES  
  readonly attribute string SQLLikeSpec;  
  readonly attribute unsigned long nEvents;  
  readonly attribute unsigned long nSeconds;  
  readonly attribute STATE_T state;  
  /* unsubmitted, submitted, complete */  
  readonly attribute float percentComplete;  
  
  // METHODS  
  unsigned long submit(unsigned long nEvents);  
  unsigned long abort();  
  unsigned long resubmit(unsigned long nEvents);  
  unsigned long continue();  
};
```

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Query Object

- Constructed from SQL-like string
- Accesses Query Estimator to determine attributes
- Calls Query Monitor to process query
- Query Monitor returns
 - list of cells
 - passed to POI Factory to construct new ODMG aware object (other attributes passed as well)

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Query Result = List<event> ?

- Ordered by “access distance”
- Obviates need of iterator
 - retrieve_element_at(nEvent)
- Q - Must order of element be determined before 1st access?
- Con - Equivalent queries result in different Lists (ordering) or inefficient access.

Query Result = Set<event> ?

- unordered
- Requires iterator
 - get_element()
 - gets “closest” unaccessed event
- Set is hidden from user (FILE* analog)
- Equivalent queries result in equivalent Sets
 - process/access order may change

Event Iterator

- Notified as data are cached (cell by cell)
 - boolean vector for events
- `getEvent => get_element()`
- Tables accessible as normal
- Releases reference against cached cell when finished

First Prototype

- “Event” consists of:
 - Hierarchy Object
 - describes Unix FS-like hierarchy
 - analogous to dataset descriptor header in DSL
 - constructs transient dataset objects
 - Table Objects
 - single class
 - BLOB with descriptor