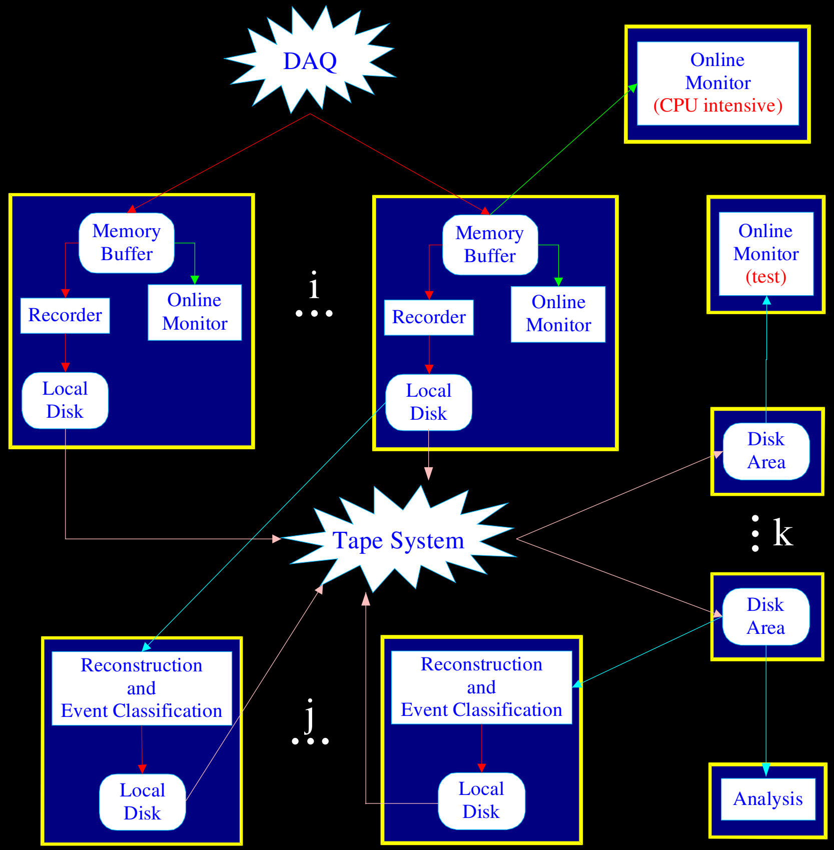
KID
KLOE Integrated Dataflow

The KLOE collaboration

presented by
Igor Sfiligoi
INFN LNF

The KLOE environment



What is KID?

- system point of view
- software developer point of view
- user point of view

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  - a set of services to manage KLOE events
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- system point of view
  - a set of services to manage KLOE events
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  - a C–based library that allows to read KLOE events independently from their current physical location
- user point of view

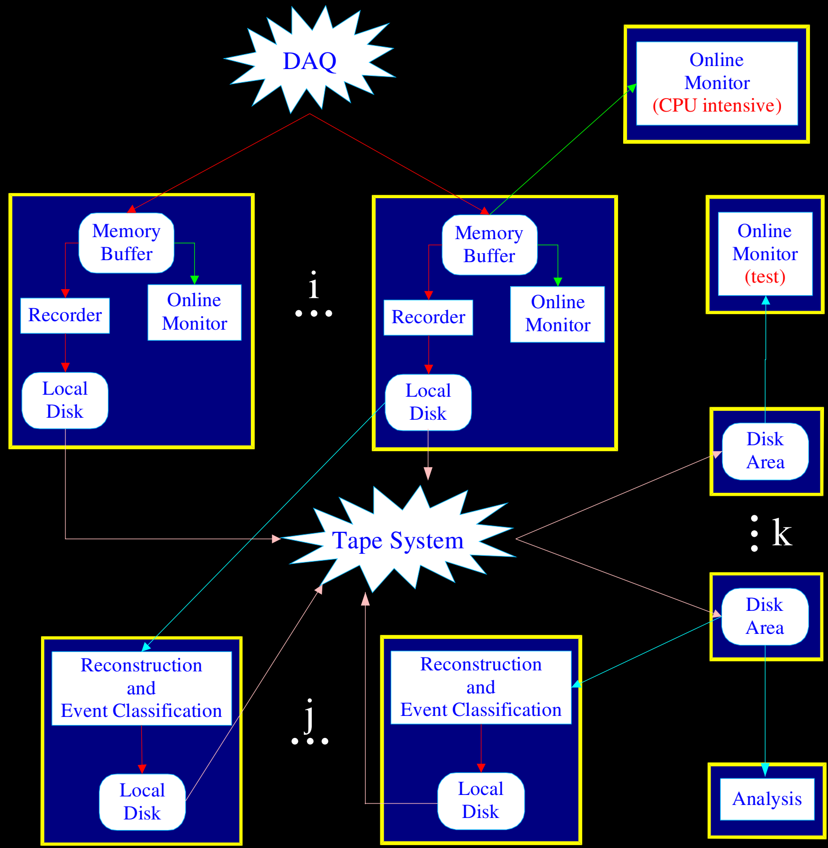
What is KID?

- system point of view
  - a set of services to manage KLOE events
- software developer point of view
  - a C–based library that allows to read KLOE events independently from their current physical location
- user point of view
  - an URI interpreter

System point of view

- automatic archival
  - database based bookkeeping

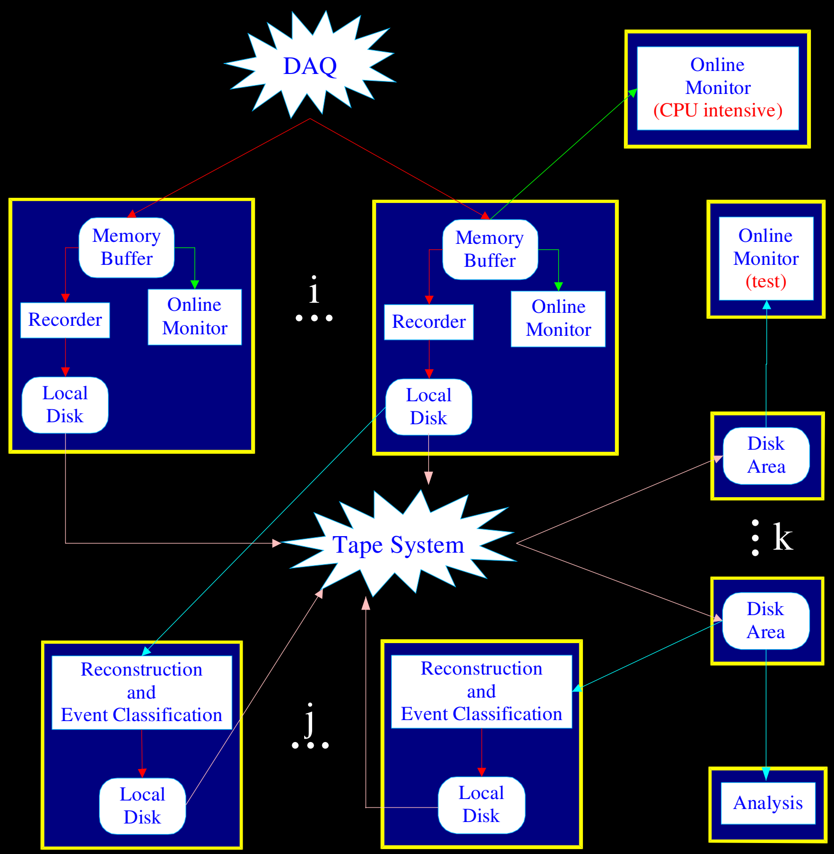
The KLOE environment



System point of view

- automatic archival
  - database based bookkeeping
- restore on request
  - restore in advance, based on previous user requests

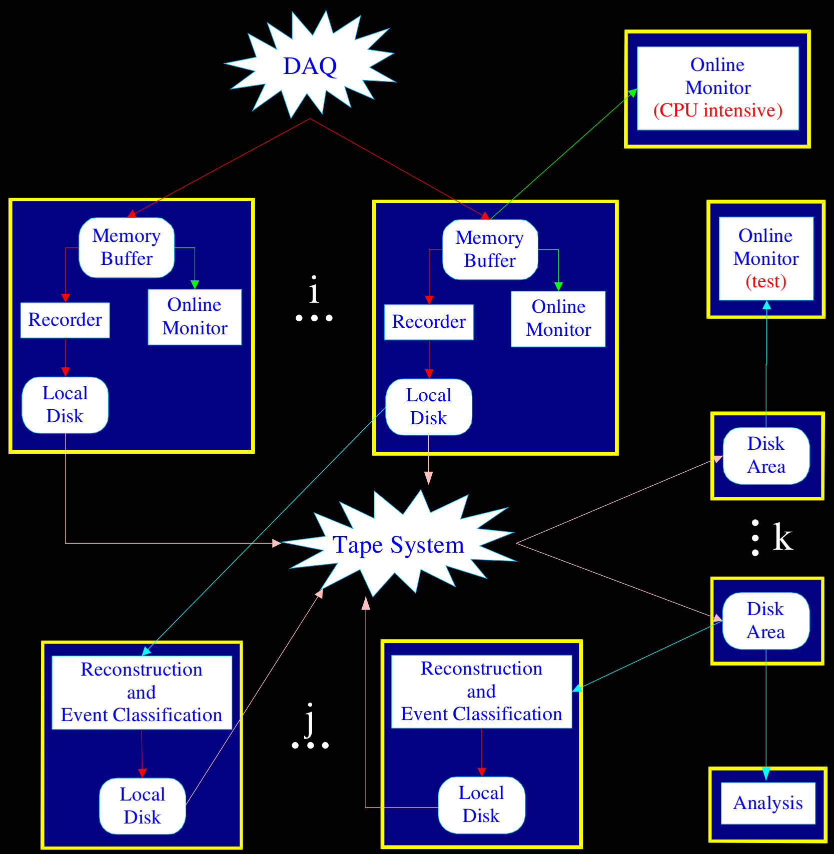
The KLOE environment



System point of view

- automatic archival
  - database based bookkeeping
- restore on request
  - restore in advance, based on previous user requests
- remote access to resources

The KLOE environment



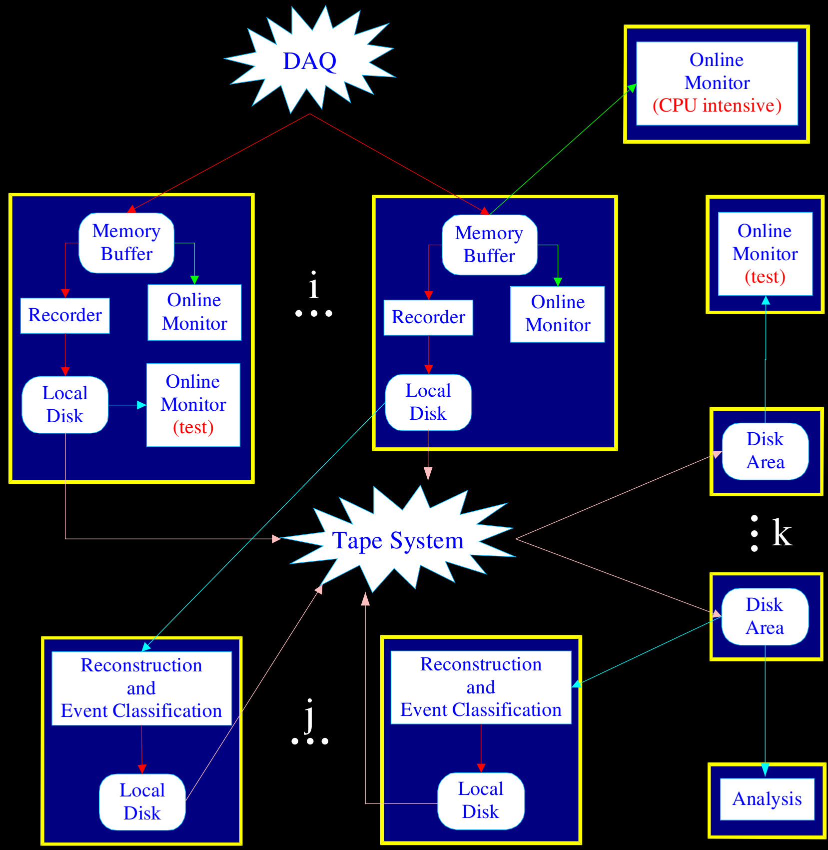
User point of view

- URI (Uniform Resource Identifier) based
  - as defined by the W3C (RFC 2396)
    - "A URI is a compact string of character for identifying an abstract or physical resource."
    - The use of URIs allows:
      - "...different types of resource identifiers to be used in the same context, even when the mechanisms used to access those resources may differ"
      - "...introduction of new types of resource identifiers without interfering with the way that existing identifiers are used"

User point of view

- URI (Uniform Resource Identifier) based
- Allows the selection of:
  - local files
    ybos:/mydir/myfile.yb

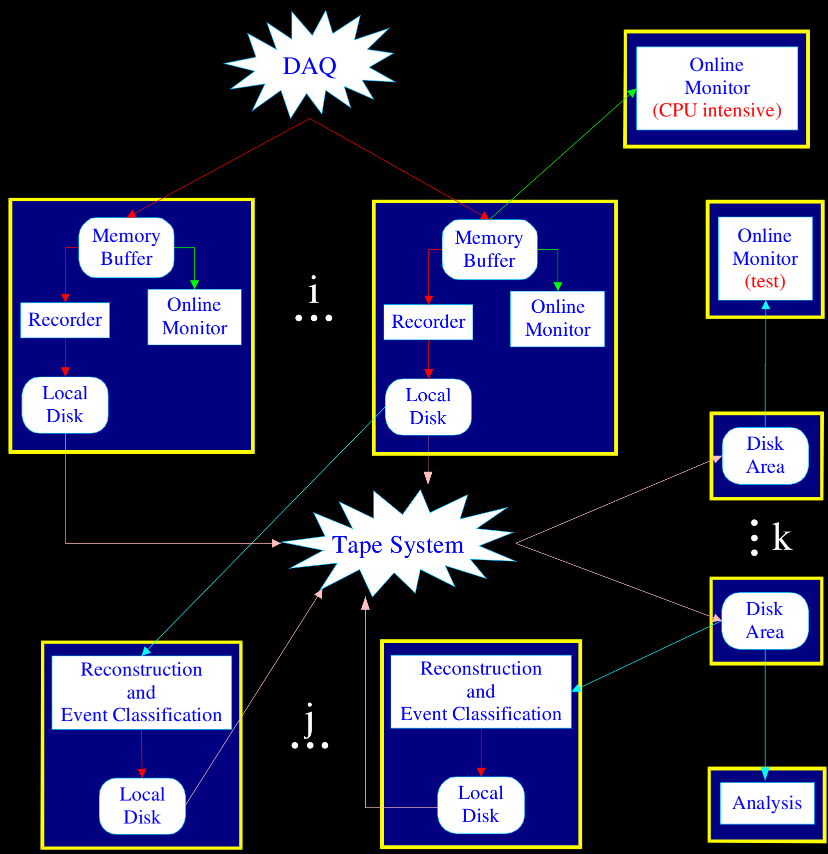
The KLOE environment



User point of view

- URI (Uniform Resource Identifier) based
- Allows the selection of:
  - local files
  - local memory buffers
    spy:/tmp/all_events

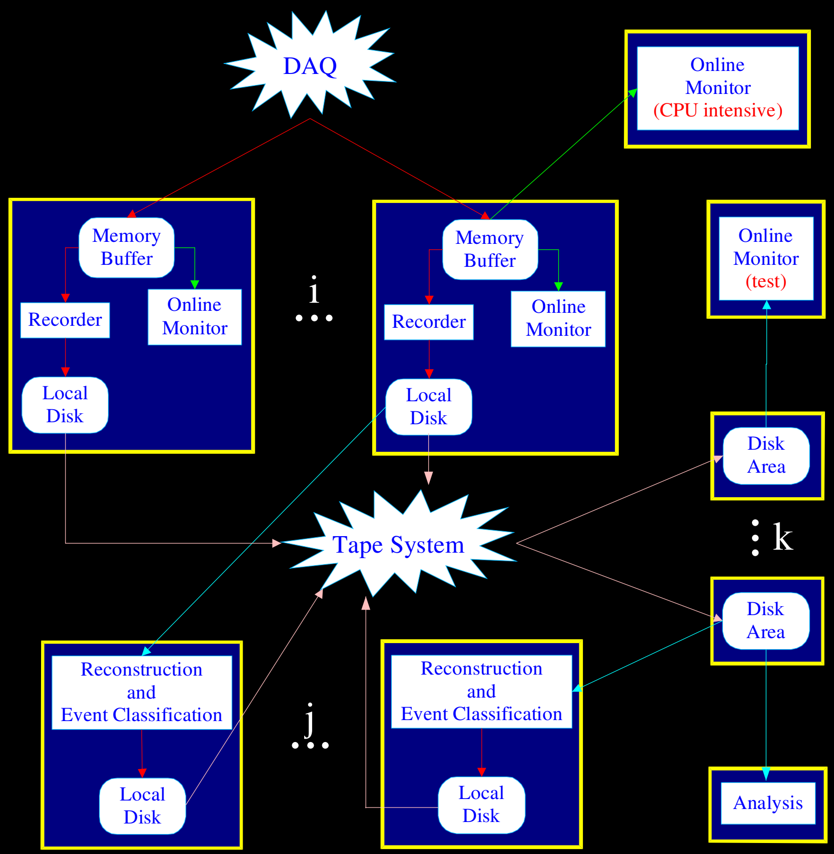
The KLOE environment



User point of view

- URI (Uniform Resource Identifier) based
- Allows the selection of:
  - local files
  - local memory buffers
  - remote resources
    remote:spy:/tmp/bhabha@farm01

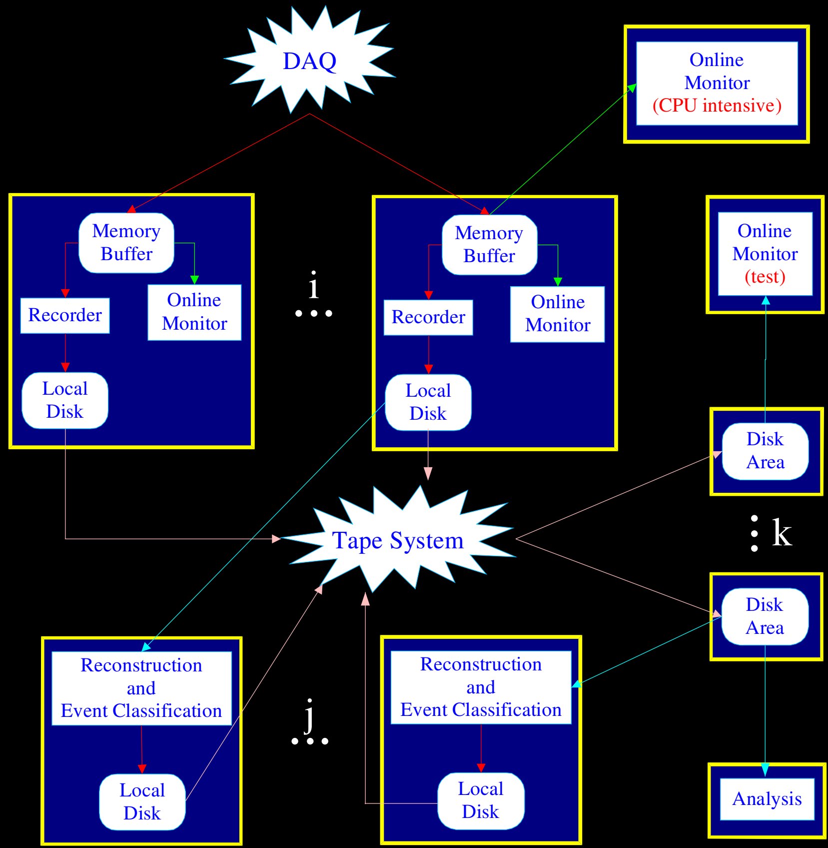
The KLOE environment



User point of view

- URI (Uniform Resource Identifier) based
- Allows the selection of:
  - local files
  - local memory buffers
  - remote resources
  - files in the storage system, database driven
    dbraw:run_nr between 300 and 400

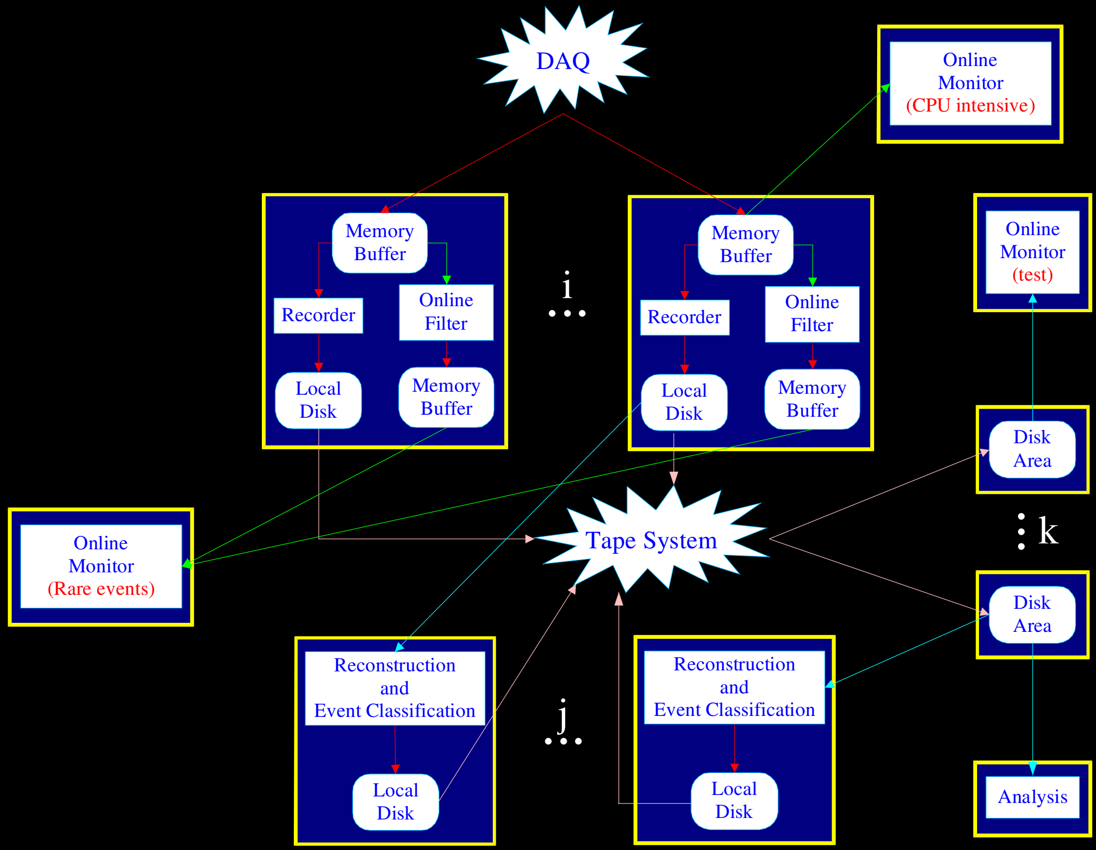
The KLOE environment



User point of view

- URI (Uniform Resource Identifier) based
- Allows the selection of:
  - local files
  - local memory buffers
  - remote resources
  - files in the storage system, database driven
  - merging of different event sources
    merge:ybos:/myfile.yb,ybos:/myfile2.yb

The KLOE environment



Software developer point of view

- A simple C interface
  - handler based
  - few functions
    - open, reopen, switch (URI based)
    - get/ by reference, static buffer, dynamic buffer
    - close
- FORTRAN bindings also provided

Software developer point of view
(cont.)

- Modular structure
  - one module for each event source
  - base infrastructure in the KID standard library
  - recursion possible
  - no common data areas
- POSIX thread safe
  - core functionality, no need for module locking

Conclusions

- Easy to use
- Quite powerful
- Easy to expand
- Most of the work done beyond the scene
  - fully automatic

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