

HDB development at Elettra



HISTORY DATABASE and ARCHIVE EVENTS

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HDB: Status



- × Java 1.5
- × Latest ATKCore/ATKWidget and TangORB;
 - × An *Elettra* CVS branch named “*elettra_archiving_5_5_2_events_branch*”, the starting point for the *archiving event-oriented* development.

HDB: development perspectives



- x In October 2006 *Elettra* “met” *Soleil*, to discuss about the **HDB future**:
 - x transparent and slow transition from the *polled* archiving system to the *event-driven* one;
 - x the user should not be aware of the archiving method being applied (*polled* or *event driven*);
 - x How long the software qualified to configure the *HDB* behaviour (*Mambo*) can remain unchanged to both ensure the desired *transparency* and provide a *good interface* to configure *polling* and *events*?

HDB: development perspectives (II)



- x *No (or little) changes to the current parameters of the archive event controller.*

Mambo would interact with HDB's *AMT* table (as it is now) and the tango device server database.

or

- x a new *widget* (or *section*) will be designed specifically for the *archive event* management.

Synchronization between Mambo driven modifications on the tango DB and possible changes made simultaneously by jive?

related settings are stored on the *amt* while the *archive event* settings will be in the *device tango database*.

HDB: the *Mambo* interface



- x Now the *Mambo* interface integrates both the *configurator* and the *viewer* for the archived data;
 - x might it be nicer if the two sections were separate, to keep apart the *configuration* from the *viewing* of the *Historical Database*?

HDB: a possible need singled out at Elettra 

The *archive event* was dedicated to the archiving tools:

- x in some cases it could be useful to limit the frequency of generation of the *archive events*, without affecting the behaviour of the *change events*.
- x A new parameter might be introduced to set a *maximum frequency* [*minimum period*] on the *archive events*.

HDB: a possible need from *Elettra* (II)



- × If for instance we impose a minimum interval of *one second*, then if an attribute changed more than one time in a second, just *one archive event* would be generated.
- × With this modification, we do not need modify the *polling period* nor affect the emission of the other kinds of *tango events*.

HDB: a possible need from *Elettra* (III)



More efficient from the CPU and network point of view, but requires an intervention on the tango kernel.

x **Device servers:**

we do not generate *archive events*

x **Client side:**

the client receives always all events and decides to filter those which fall inside the minimum period.

- This does not come *naturally*: each client must implement a filter in the time;
- This is not efficient: the server still emits events which are not desired.

***xDB?*: another possible need**



**A practical example: a
*beam dump caused by fast interlock***

- x A large number of attributes to be analyzed;
- x we need very high resolution timestamps.
 - x *Post mortem* dumps.

***xDB?*: another possible need (II)**



- x Does anyone have similar needs?
- x Does anyone have already implemented something working?
 - x Separated or integrated with *HDB*?
 - x Format for *high resolution timestamp*.

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