



TINE Release 4.0 News

(Oct 10, 2008: That was the week that was !)

“What a long, strange trip it’s been”

[TINE Kernel 4.0.4]

- Ready to implement the “CYCLER”
 - DESY2
- Ready to archive with new data stamps
 - Local histories
 - Has been tested (C and java)
 - Central archive
 - Still needs to be tested

[TINE Kernel 4.0.4]

- Notes about archiving
 - Two general possibilities
 - 'Minimal' storage
 - UTC timestamp (4-byte integer - seconds)
 - data record
 - => Currently the default
 - 'Normal' storage
 - UTC timestamp (8-byte double – seconds.milliseconds)
 - System stamp (4-byte integer – cycle number)
 - User stamp (4-byte integer – as read with the data)
 - data record
 - => can also stored in a 'non-fragmented' way
 - Data record
 - Scalar
 - Multi-channel array
 - Spectrum array
 - Can be any format type
 - Float (just the value)
 - FLTINT (value-status pair)
 - STRUCT (a user-defined structure)
 - ...

[TINE Kernel 4.0.4]

- Data retrieval
 - Traditionally:
 - 'Normal' TINE call (e.g. from the instant client)
 - Get 'plottable' data
 - array of value-timestamp pairs
 - Float values -> array of "FLTINT" (of DBLDBL)
 - Problem 'carrying' complex data types
 - General 'Object' + timestamp (i.e. all data stamps)
 - Introduce format type CF_HISTORY
 - Deliver the full set of data stamps (16 bytes)
 - Carried format
 - Data tag => canonical string representation of carried format
 - float => "FLOAT"
 - FLTINT => "FLTINT"
 - Struct => the structure tag
 - IMAGE = "IMAGE"
 - ...
 - What to do about CF_IMAGE, CF_SPECTRUM?
 - Standard fixed storage size
 - SPECTRUM => 4096 floats
 - IMAGE => 500000 bytes + image header

[TINE Kernel 4.0.4]

- Format type CF_HISTORY

- Not for the 'casual' user
- Used systematically in history calls
- Possible archive calls:

- `GetArchivedDataAsAny(dev, start, stop, dataHdr, data, dataFmt, dataTag, num)`

- Or ...

- `GetArchivedDataAsAny(dev, start, stop, DTYPE *dhst, num)`

(DTYPE in C, TDataType in java)

[TINE Kernel 4.0.4]

- Bug-fixes and Embellishments:
 - GENS (group name server)
 - Inaccessible due to ...
 - Redirection did not remove client from the local client table!
 - -> relying on delivery system to flush dangling clients
 - bad idea! -> almost never 'delivering' anything!
 - php script was able to trigger this fairly easily!
 - Resolved!

Bug-fixes, Embellishments, Works in progress ...

- “Keyword” stock property:
 - <property>.KEY parsed from description
 - e.g. “[0:1000 V][0:500 ms]<TRC>Transient Recorder voltage vs time” -> returns “TRC”.
 - tget in scripts.
 - Unix world launches a tmeRepeater to handle the requests.
 - Communicates via pipe
 - Starts a listener for read data sets
 - Avoids bothersome queries to ENS as well as synchronous polling of the target server.
 - Nothing there for windows yet!