TINE Release 4.0 News
(Nov 6, 2009: That was the month that was !)

"What a long, strange trip it's been …."

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- **C Library:**
  - *More threads* !
    - Globals thread
    - Server Multicast thread
    - Lazy-scheduling thread
    - TCP threads (send and recv)
    - Server cycle / client cycle on different threads
  - *In addtion to :*
    - Shm thread
    - CM_STREAM threads
    - Background task threads
    - Stock property thread (some stock properties)
    - Optional Eqm thread

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- Performance enhancements
  - SetSystemSubscriptionRenewalLength()
    - **Default** = 60 (with automatic scaling based on polling interval)
    - **Normally**: 'don't touch this'!
    - **Special case**: video server scheduling **events** at 30 Hz.
  - *New command*: get settings:

```
get settings
>Server Settings     :
>Server Work Area    : 1048576 bytes
>System Polling rate : 10 msec
>Contract renewal len: 60 items
>Req ack. on change  : yes
>Server Burst Limit  : 1000 packets
>Burst Cycle Delay   : 20 packets
>Server Packet MTU   : 1472 bytes
>Server Send Buffers : 16384 bytes
>Server Recv Buffers : 8192 bytes
>Server Scheduling   : eager
>Server cycle thread : common
>transport thread    : separate
>Client Settings     :
>Client Work Area    : 65536 bytes
>Client Burst Limit  : 1000 packets
>Client Send Buffers : 16384 bytes
>Client Recv Buffers : 8192 bytes
>Client Recv Queue   : 10 items
>use loopback addr   : no
>use watchdog links  : yes
>allow common links  : yes
>retry on timeout    : yes
>
```

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- **C Library**:
  - Access lock offers *Exclusive Read*
    - Client-side:
      - **SetAccessLock**("PETRA","PiConditions", LOCK_PERSISTENT|LOCK_XREAD,3600);
    - Server-side:
      - Properties registered with CA_XREAD access flag will return 'access_suspended' if not the client with the access lock!

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- **C Library**:
  - Force CM_RECEIVE for links to 'GLOBALS' server (á la java-lib)
- **C** and java:
  - Resubmit *failed* CM_CANCEL requests
    - Applies to CloseLink() call which *apparently* got *lost*.

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- **Java**:
  - Servers can now respond to 'network address requests' (á la C-lib)
    - Request from ESRF (EMBL)
    - Allows clients and servers to find each other without an ENS!
      - No browsing possible, BUT:
      - Client knows who it wants to talk to -> finds the server address by multicast magic!
    - TEquipmentModuleFactory: (server-side)
      - setRespondToServiceRequests(**true**)
    - TLinkFactory: (client-side)
      - setAllowNetworkAddressResolution(**true**)

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- **Java lib**
  - TQuery:
    - int **pingServer**(context,server,timeout)
      - returns '0' (success) or TINE error code
      - Overloaded method generates output on stdout.
    - boolean **isValidServer**(context,server)
      - tests if the server *exists* in the context given.

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- Java lib
  - acopTransport
    - String getConnectionInformation(deviceContext, deviceGroup, deviceName, deviceProperty)
    - String getConnectionInformation(**int** hLink)

getConnectionInformation**("DESY2","ACCXPD2GRABBER",null,null)**

```
Local Equipment Module : GRAEQM
Front End Computer      : ACCXPD2GRABBER
IP Address             : 131.169.154.175
Port Offset            : 11
Host Name              : AccXpD2Grabber1.desy.de
Location               : BLDG 20 (SER) Rack B2
OS                     : WIN32
Description            : Grabber server control of ACCXPD2GRABBER
```

Central Services

- Central Archive
  - Recognized '*point of interest*' will generate a '*transition data point*' if necessary.
    - archived data filtered as we go along.
    - sudden jump from a 'constant' value could lead to a displayed 'ramp' if data points are connected with a poly-line.
    - Insert a 'best-guess' at 'now' – polling interval if necessary.

Central Services

- Motor Server now in download package
  - Common server
  - Load 'motor-specific' library with necessary dispatch routines.

Other news

- .NET servers undergoing beta testing
  - Mark Lomperski
- Perl Bindings now available
  - Andres Pazos
- Python Bindings complete (?)
  - Andres Pazos

Camstudio demos

- http://adweb.desy.de/mcs/tine/TineDemos.html