TINE Release 4.0 News
(March 11, 2011: That was the month that was !)

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

Release 4.2.1

- ## Both C Lib and Java Lib at 4.2.1 !
  - ### 'Save-and-Restore' Features:
    - #### Allow a '*Restore only*' capability
      - READ-ONLY Properties can register with the *CA_SAVERESTORE* flag!
      - Can only rely on the equipment module handler to know what to do to restore the property settings.
      - EQM handler will be called at initialization with the access set to *CA_WRITE|CA_SAVERESTORE*
      - Handler must be willing to check this and accept the call (and do the 'right thing') in this case.

Release 4.2.1

- TCP Transfers
  - Server-side *memory-leak* found and fixed!
  - Fixed client-side problem shutting down socket after the '*idle time*' expired.
  - Improved diagnostics
    - => Introduced *exotic bug* (noticed by MSK)
    - Fixed in 4.2.1

Release 4.2.1

- **Local Alarm System** Improvements
  - Individual alarm codes now maintain their own '*oscillation windows*'
    - **Oscillating Alarm**:
      - "persistent alarm which *comes and goes* over a 'short' time range."
    - 'short time range' defines the oscillation window
      - default: 5 'clear counts' (=> 5 secs at 1 Hz i/o)
      - can grow to 128 'clear counts' (~2 minutes)
      - If alarm DOES disappear -> can still appear active for up to the 'oscillation window' time.
      - Note: a call to TerminateAlarm() clears alarm immediately.
    - Was a '*one-size-fits-all*' global variable
    - Now applies to each alarm code individually!

Release 4.2.1

- **Local Alarm System** Improvements
  - SetAlarmOscillationWindow(value)
    - Sets 'global' value of oscillation window and '*pin*' the window to this value (no 'learning').
    - Establishes a 'default' value
  - SetAlarmCodeOscillationWindow(eqm,code,value)
    - Sets the oscillation window for given alarm code and '*pin*' the window to this value.
    - Supersedes the 'default' value.

Release 4.2.1

- **Local Alarm System** Improvements
  - Alarm Watch Table entries now incorporate the '*watched*' property in the alarm tag!
    - Previously: a generic tag such as e.g.
      - 'value too high'
    - Example:

	A	B	C	D	E	F	G	H	I	J	
	LOCALNAME	DEVICENAMI	PROPERTY	SIZE	FORMAT	SEVERITY	HIGH	LOW	HIGHWAR	LOWWARN	
	SINEQM	#0	Amplitude	10	float.CHANNEL	12	300	10	200	20	
	SINEQM	#0	Frequency	10	float.CHANNEL	12	4	1	3	1	

Release 4.2.1

Release 4.2.1

- Time Synchronization
  - Servers schedule activity based on the *local system clock* !
  - Clients accept/reject incoming (linked) data based on the *data timestamp* !
  - TINE Time Server provides all servers with a *reference timestamp*.
  - Servers apply an *offset* to the data timestamp returned to a caller based on the timestamp reference.
  - *Stability* of system clock and incoming references intervals required !

Release 4.2.1

- New to Release 4.2.1
  - A negative '*jump*' in the system clock at the server applies an '*immediate*' correction to the timestamp offset.
    - Likely only if corrected by hand or via RDATE.
  - C-Lib: new routine SetUseGlobalSynchronization(value) can be used to turn *OFF* synchronization.
  - Environment variable: **TINE_USE_GLOBAL_SYNCHRONIZATION** can likewise be used to turn *OFF* synchronization.