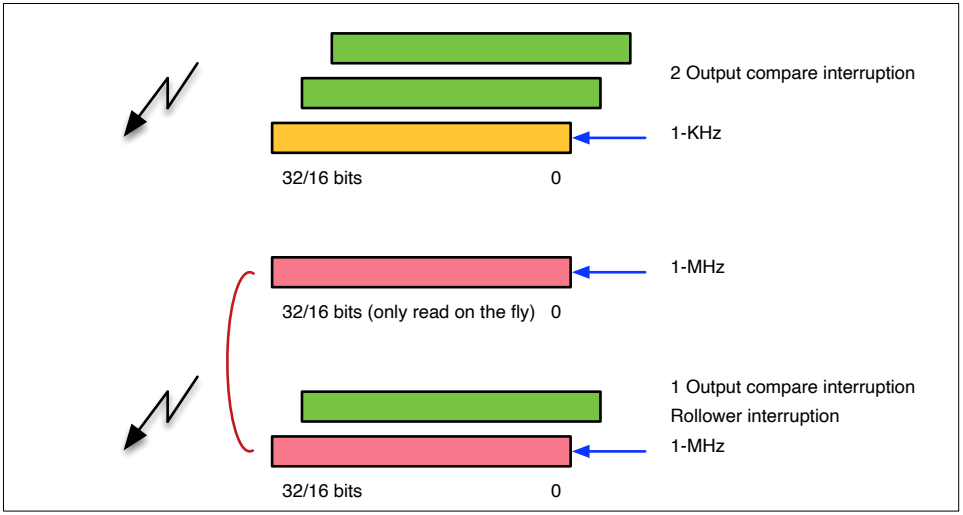
HW timers for µKOS-X

µKOS-X kernel need some temporal reference for managing all the aspects of the real-time.



1-ms timers for the timeout and for temporal reference (**mandatory**)

I. Temporal aspects: **kern_suspendProcess(uint32_t time).**
II. Task timeout (maximum allocated slot for a task (usually **20-ms**).
III. Requirements: have to generate programmable interruptions between **1-ms to xx-ms** (xx depends on the timer resolution; **best 32-bits**, 16-bits OK.

1-us free running timers for statistics and for the 64-bit tick count (**should have**)

I. monitoring the task switching time (statistics).
II. used to build the 64-bit counter and to maintain the unix time: **kern_getTickCount(uint64_t time).**
III. requirements: simple read counter.

1-us for 64-bit precise timers (**should have**)

I. Should allows to generate programmable and precise delays between **1-us and xx-us.**

II. Requirements: have to generate programmable interruptions between **1-us to xx-us** (xx depends on the timer resolution; **best 32-bits**, 16-bits OK.

RTC 32-KHz for maintaining the unix time and the calendar (**nice to have**)

I. Requirements: battery retention.