

# winIDEA

## User Interface

### CMX RTOS Kernel Awareness

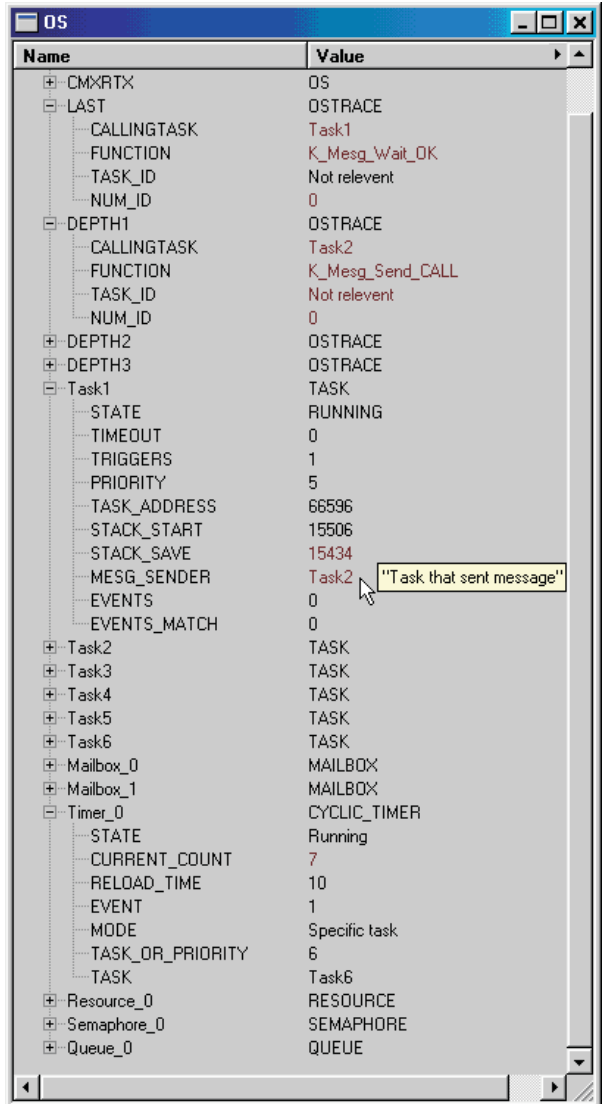
CMX RTOS is a Real-Time Multi-Tasking Operating System from CMX Systems supporting most 8, 16, 32 and 64 bit embedded Microcontrollers, Microprocessors and DSPs. CMX has developed CMXKAware, which integrates seamlessly with third party emulators in order to improve the debugging capabilities. CMXKAware Kernel Awareness is available as an add in module to the CMX RTOS.

WinIDEA uses new OSEK Run time Interface (ORTI) for CMXKAware to interface to the CMX-RTX RTOS. The CMXKAware ORTI Builder automates the creation of ORTI files adapted to the CMX-RTX RTOS for debugging purposes. CMX awarness implemented over the ORTI file doesn't require any target resources. WinIDEA OS window provides you with information about each of

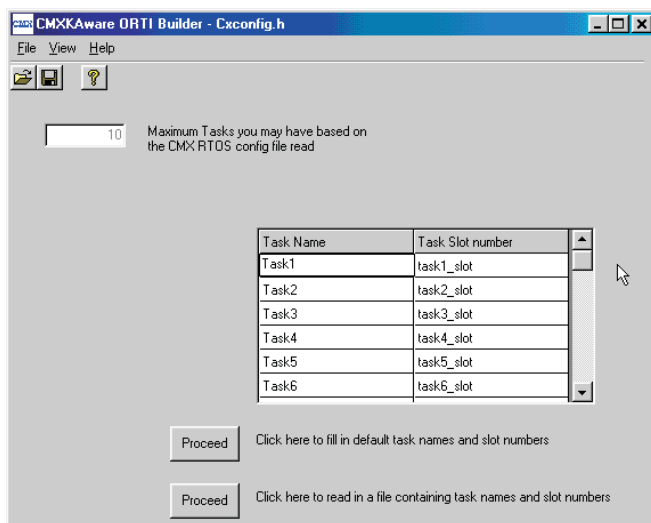


the active tasks in the target application, about each semaphore, resources, mailbox, queue and event flag group along with a list of all the tasks waiting on these kernel objects, and more.

By performing a continuous scan of the internal data structures described in the ORTI file, the debugger extracts and displays critical kernel-relative information, such as task states and event traces for the last four RTOS calls.



WinIDEA OS window



CMX-KAware ORTI Builder

Depending on the development system, only functions called by the specific task can be profiled. This provides the information on function run times for specific task. Further, task run times and task execution history can be analyzed by configuring the profiler for tasks analysis.

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