POSIX System Services Working Group — Realtime (SSWG-RT)

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Joe Gwinn is the chair of the POSIX System Services Working Group — Realtime (SSWG-RT).

The POSIX System Services Working Group — Realtime (SSWG-RT) is considering amendments to the realtime POSIX profiles IEEE Std 1003.13-1998, reflecting implementation, and field experience with 1003.13. People wishing to offer their experience with and ideas for improvement of 1003.13 are encouraged to contact the chair of SSWG-RT, Joe Gwinn *<gwinn@res.ray.com>*.

IEEE Std 1003.13-1998 is a family of four related realtime profiles ranging in size from the very small through a full-featured platform conforming to essentially all of 1003.1, 1003.1b (realtime), and 1003.1c (threads), and the parallel Ada binding 1003.5b, with realtime options chosen. The smaller profiles specify just that subset of POSIX interfaces needed to "clothe" widely used small kernels such as pSOS (from ISI), VxWorks (from Wind River), and VRTX32 (now from Mentor), and the ORKID interface standard (from VITA), which, although very similar in approach and function, differ greatly in interface details. (As a matter of interest, there are more of these small kernels in UNIX systems than there are UNIX kernels because, for instance, many I/O controllers and peripherals themselves use one of these small kernels.)

Standardization of these interfaces will yield the same benefits for embedded and realtime as standardization of UNIX did for workstations. In addition, the P1003.13 interfaces are chosen to allow multi-computer distributed systems to be built, such as those used in factory automation. Such systems are typically set up as a hierarchy, with a few large-profile machines at the top, and a large number of smaller profile machines at the bottom controlling this or that piece of machinery, perhaps with an intermediate layer of supervisory machines between top and base, and all communicating with peers, superiors, and subordinates, as needed.

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