

**Release Notes
RTS Version 3.9.19
08 March 2001**

1.0 Overview

This document describes changes included within:

<u>Module Name</u>	<u>Module Description</u>
SysConf	System Configuration
TPS	TYX Programming Support
PORF	PAWS Output Report Formatter
Targetter	ATLAS Program Targetter
XUtil	TYX X-Window Utilities
WinUtil	TYX MS Windows Utilities
PLI	PAWS LAPS Interpreter
PTE	PAWS Test Executive
CEM	PAWS CIIL Emulation Module

Note: SysConf is used by TPS, PORF, Targetter, XUtil, WinUtil, PLI, PTE and CEM
TPS is used by PORF, Targetter, XUtil, WinUtil, PLI, PTE and CEM.
XUtil and WinUtil are used by PLI and PTE.

<u>Module</u>	<u>Changes</u>	<u>Rebuilt</u>	<u>Current Version</u>
SysConf	None	N/A	20000501
TPS	None	No	20000501
PORF	None	No	20000508
Targetter	None	No	20000508 3.8.3
Xutil	None	No	20000508
WinUtil	None	No	20000508
PLI	None	No	20000508 3.9.13
PTE	Minor	Yes	20010308 3.9.19
CEM	Minor	Yes	20010308 3.9.19

PTE means both the Run-Time System (RTS) and the Simulator (SIM).

PTE, RTS, CEM and SIM mean all Platforms.

UPTE, URTS, UCEM and USIM mean UNIX Platforms only.

WPTE, WRTS, WCEM and WSIM mean MS-Windows Platforms only.

XPTE, XRTS and XSIM mean X-Window Platforms only.

NOTICE TO CEM USERS

This version of the RTS is compatible with CEM Modules built with CEM Files distributed with RTS Version 19980714 3.9.7 and later. You may install this version of the RTS without rebuilding your CEM Module. However, in order to make use of the new CEM capabilities, you **MUST** install this version of the RTS, and then you **MUST** recompile and relink your CEM Module(s) with the TYX-supplied CEM Files distributed with this version of the RTS.

As time goes on, RTS/CEM testing to provide error-free backwards-compatibility becomes increasingly difficult. Therefore, TYX Corporation very strongly recommends that CEM Users

recompile and relink their CEM Modules after installing a new version of the RTS.

1.1 Enhancements

CEM Error Message with Error Bits (*ErrMsgBits()*) vice Error Number (*ErrMsg()*)

Prior to this release, the CEM Kernel only allowed a CEM Device Driver to register an error by specifying an Error Number plus a Message String. When the RTS receives the Error Message from the CEM Kernel, the RTS takes various actions depending on the value of the Error Number.

With this release, the CEM Kernel also allows a CEM Device Driver to register an error by specifying one or more Error Bits plus a Message String. When the RTS receives the Error Message from the CEM Kernel, the RTS takes the actions specified by the Error Bits. See the CEM Help Section below for detailed information about the new CEM Macro *ErrMsgBits()*.

Note: CEM Error Messages with Error Bits are supported by the Studio RTS but are not supported by WRTS and XRTS. If by some chance WRTS or XRTS were to receive one of these Messages, the Message would be processed as if it were a CEM Error Message with an Error Number of zero.

1.2 Problem Reports.

None

CEM Help

The purpose of this Section is to describe changes made to the CEM User Interface that will eventually be added to the CEM On-Line Help.

Update to Terminal I/O CEM Macro Group

ErrMsgBits()

Note *ErrMsgBits()* is new and is documented below. *ErrMsg()* is not new but is documented below because it is not sufficiently documented in the current CEM Help Files.

Name: ErrMsg

Type: Terminal I/O

Usage: `short nErrMsg;
char *pcErrMsg;
ErrMsg(nErrMsg, pcErrMsg);`

Description: This Macro causes an Error Message to be queued for eventual delivery to the RTS. The Error Message has the following format:

F *Error Device* : **CH** *Channel* [*Name*] *Line* : *StatNo* *Message*

<u>where</u>	<u>is</u>
F	a Literal.
<i>Error</i>	the Decimal Error Number specified by nErrMsg .
<i>Device</i>	the Device Name.
:CH	a Literal.
<i>Channel</i>	the Device Channel.
[a Literal.
<i>Name</i>	the ATLAS Module Name.
]	a Literal
<i>Line</i>	the ATLAS Module Source File Line Number.
:	a Literal
<i>StatNo</i>	the ATLAS Module Statement Number.
<i>Message</i>	the Message String specified by pcErrMsg .

See Also: CEM Macro *ErrMsgBits()*.

Name: ErrMsgBits

Note CEM Error Messages with Error Bits are supported only by the Studio RTS.

Type: Terminal I/O

Usage: `short nErrMsgBits;
char *pcErrMsg;
ErrMsgBits(nErrMsgBits, pcErrMsg);`

Description: This Macro causes an Error Message to be queued for eventual delivery to the RTS. The Error Message has the following format:

F*Error Device*:**CH***Channel* [*Name*]**Line**:*StatNo* *Message*

where is

F a Literal.

Error the Decimal Error Number derived from **nErrMsgBits** as follows:

1. If **nErrMsgBits** is zero, set **nErrMsgBits** to **0x7FFF**. Otherwise, clear **nErrMsgBits** Sign Bit (Bit 2**15).
2. Convert **nErrMsgBits** to Long Integer.
3. Logical-Left-Shift Long Integer 16 bit positions.

Therefore, the minimum decimal value will be +65,536 (for 0x0001) and the maximum decimal value will be +2,147,418,112 (for 0x7FFF). See below for the defined bit values of **nErrMsgBits**.

Device the Device Name.

:CH a Literal.

Channel the Device Channel.

[a Literal.

Name the ATLAS Module Name.

] a Literal

Line the ATLAS Module Source File Line Number.

: a Literal

StatNo the ATLAS Module Statement Number.

Message the Message String specified by **pcErrMsg**.

nErrMsgBits is defined as containing three Bit Fields that should be set using the Labels specified below (which are defined in the CEM Header File *cem.h*):

Severity Field There are three mutually-exclusive Labels for specifying the severity of the error:

EB_SEVERITY_INFO
EB_SEVERITY_WARNING
EB_SEVERITY_ERROR

Action Field There are three mutually exclusive Labels for specifying what action the RTS is to take pertaining to the execution of the ATLAS Program:

EB_ACTION_HALT

EB_ACTION_RESET
EB_ACTION_ABORT

Set Field There is one Label for specifying a specific RTS action:

EB_SET_MAXTIME

See Also: CEM Macro *ErrMsg()*.