StartPreOS Sequence

1. Callout EcuM_AL_SetProgrammableInterrupts; on ECUs with programmable interrupts priorities, the priorities must be set before the OS is started.
2. Callout EcuM_AL_DriverInitZero; initialize block 0, default error tracer, Dem_PreInit and any driver needs to access the post build configuriatons.
3. Callout EcuM_DeterminePbConfiguratoin; return a pointer to fully initialized EcuM_ConfigType structure has the post build configuration data for the ECU manager module and BSW modules.
4. Check consistency of configuration data; if check fails the EcuM_ErrorHook is called.
5. Callout EcuM_AL_DriverInitOne; initialize block one, containing the MCAL drivers in preOS.
6. Get reset reason; is derived from a call to Mcu_GetResetReason and mapping defined via the EcuMWakeupSource configuration containers.
7. Select default shutdown target; EcuM_SelectShutdownTarget.
8. Callout EcuM_LoopDetection; if loop detection is enabled, this callout is call on every startup.
9. StartOS; start the AUTOSAR OS.

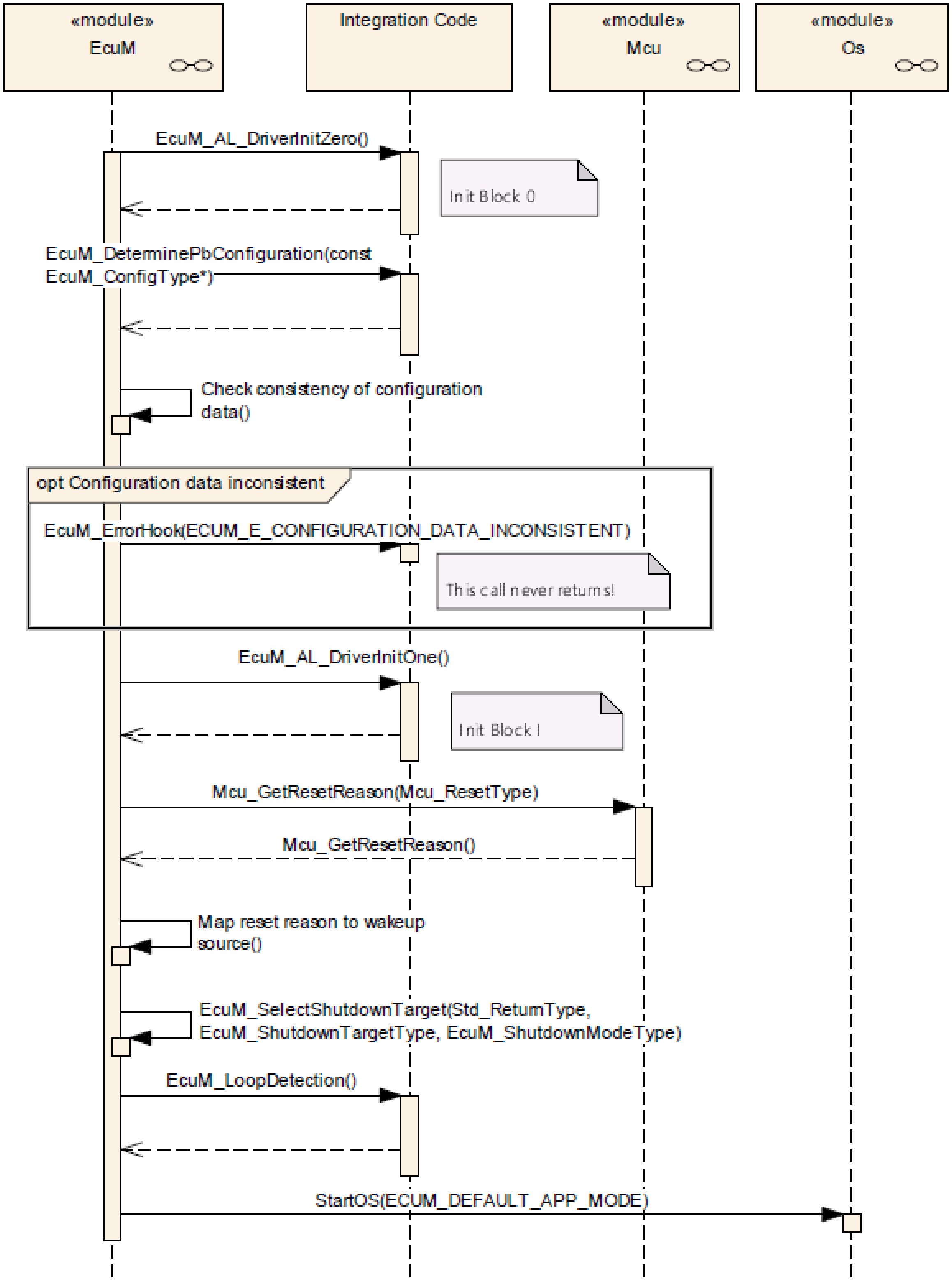
«module»
EcuM
Integration Code
«module»
Mcu
«module»
Os
EcuM_AL_DriverInitZero()
Init Block 0
EcuM_DeterminePbConfiguration(const
EcuM_ConfigType*)
Check consistency of configuration
data()
opt Configuration data inconsistent
EcuM_ErrorHook(ECUM_E_CONFIGURATION_DATA_INCONSISTENT)
This call never returns!
EcuM_AL_DriverInitOne()
Init Block I
Mcu_GetResetReason(Mcu_ResetType)
Mcu_GetResetReason()
Map reset reason to wakeup
source()
EcuM_SelectShutdownTarget(Std_ReturnType,
EcuM_ShutdownTargetType, EcuM_ShutdownModeType)
EcuM_LoopDetection()
StartOS(ECUM_DEFAULT_APP_MODE)

Figure 7.4: StartPreOS Sequence

OFFPreOS Sequence

1. EcuM_OnGoOffOne()
2. De_init BSW Mode Manager; BswM_Deinit()
3. De_init BSW Scheduler; ShcM_Deinit()
4. Check for pending wakeup events, purpose is to detect wakeup events that occurred during shutdown; EcuM_GetPendingWakeupEvents()
5. EcuM_SelectShutdownTarget() or Set RESET as shutdown target, if wakeup events are pending (default reset mode of EcuMDefaultResetModeRef will be used; this action shall only be carried out when pending wakeup events were detected to allow an immediate startup.
6. ShutdownOS(); last operating in this OS task

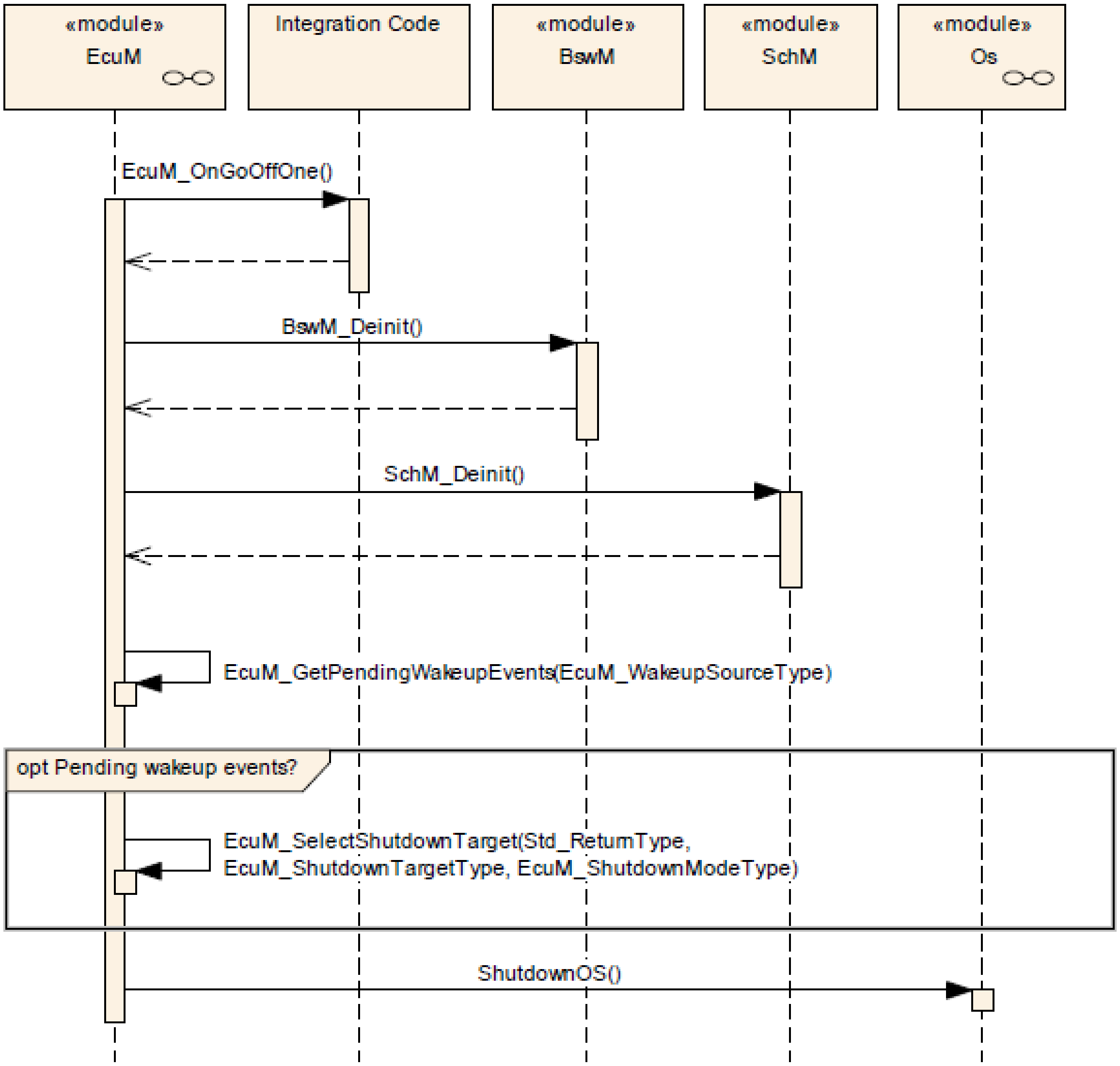
«module»
EcuM
Integration Code
«module»
BswM
«module»
SchM
«module»
Os
EcuM_OnGoOffOne()
BswM_Deinit()
SchM_Deinit()
EcuM_GetPendingWakeupEvents(EcuM_WakeupSourceType)
opt Pending wakeup events?
EcuM_SelectShutdownTarget(Std_ReturnType,
EcuM_ShutdownTargetType, EcuM_ShutdownModeType)
ShutdownOS()

Figure 7.8: OffPreOS Sequence