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Interrupt Inits

GameTimer One-Shot Timer Interrupt:

GamerTimerInit
Takes nothing, returns nothing (1shot timer init)

Start by enabling the clock to the timer (Wide Timer 0)
Loop until timer hardware is ready
Disable timer A before configuring
Configure timer for 32bit (individual instead of concatenated)
Macro define 16bit refers to individual timer rather than actual 16bit
Set Timer a into one-shot mode (mask bits 0:1 and write value for 1-shot mode = 0x01)
Set timeout to half turn by default
Enable local timeout interrupt. TATOIM = bit 0
Enable interrupt in NVIC register 94
Change priority of one-shot to 0
Put the load into the ILR
Turn on interrupts globally
Set timer to stall in debugging. We will wait until the start function to start the timer

GPIO Event Detection Interrupts:

BeaconDetectionInit
Takes nothing, returns nothing

Enable Digital IN for BEACON
Set direction of pins to INPUT
Enable the interrupt event for PB0 rising edge
Enable interrupt in NVIC
Change priority of event interrupt to 0. It is interrupt 1, so PRI0

BeaconDetectionResponse
Takes nothing, returns nothing

```
Clear source of the interrupt
Increment BeacondDetected to keep track of how many pulses we got
If the Counter has reached the desired amount (to confirm that we are
aligned with the beacon)
      Call GoToStandby mode function
      Mask the interrupt
Endif
```

TapeDetectionInit

```
Takes nothing, returns nothing

Enable Digital IN for BEACON
Set direction of pins to INPUT
Enable the interrupt event for PB0 falling edge
Enable interrupt in NVIC
Change priority of event interrupt to 1. It is interrupt 1, so PRI0
```

TapeDetectionResponse

```
Takes nothing, returns nothing

Clear source of the interrupt
If the interrupt happened, the tape sensor has been sensed so disable
the interrupt
Call GoToStandby mode
```

DetectionResponse

```
Takes nothing, returns nothing
If the Beacon Detection Interrupt is unmasked
      Call BeaconDetectionReponse
Else if the Tape Detect Interrupt is unmaksed
      Call TapeDetectResponse
Endif
```