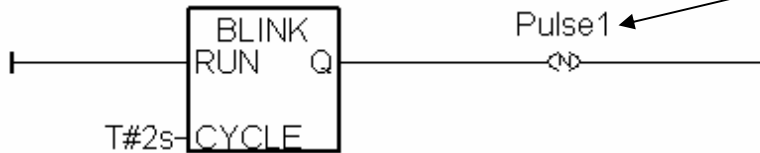


How to do periodic operation in ISaGRAF controllers ?

The “BLINK” function block can apply to generate a Pulse True periodically. So it can apply in some periodic operations like as below.

(* LD program *)



“Pulse1” is Boolean Internal
Periodic operation every 2 sec

(* ST program *)

IF Pulse1 THEN (* above LD program will generate a pulse TRUE in “pulse1” variable *)

(* do operation *)
(* *)

END_IF ;

The above program has a disadvantage. When the periodic interval time is short, for example – 200ms or smaller, or the controller ‘s PLC scan time is bigger , the operation time will not be precise. For example to do a periodic operation every 50 milli-second. Because 50ms is a shorter interval , it is much closer to the PLC scan time compared to interval time of 250 ms or 2 seconds, the result time will not be precise. To improve this, following codes can be applied. ST program:

```

IF INIT THEN
  INIT := False ;
  T1 := T#0s ;
  T1_next := T1 + T#50ms ;
  Tstart (T1) ;
END_IF ;
  
```

“INIT” is declared as Boolean Internal
And init as TRUE
“T1” and “T1_next” are Timer Internal

```

IF T1 >= T1_next THEN
  IF T1 > T#22h THEN
    T1 := T#0s ;
    T1_next := T#0s ;
  END_IF ;
  T1_next := T1_next + T#50ms ; (* calculate next operation time *)
  
```

Timer will be overflow if it is ticking to
T#23h59m59s999ms. So we can reset it to 0
second when it just reach the “22h” or “16h”
whatever a bigger time you like.

(* do operation *)
(* *)

END_IF ;