

SAGA Clock-Cycle Register

Overview

Clock-Cycle Register is a new SAGA Read-Only register. It is unique feature, never seen in other 68K existing system. It allows to get, in real-time, the number of cycles consumed by one or more instructions. This register can come in handy when programmer need to optimize his code and locate greedy routines.

Name

- SAGA_CLOCK_COUNTER

Address

- 0xDE0008

Access

- Read-Only

Size

- 32-bits

Description

Each time register is read, the internal counter is reinitialized to 0.

Can overflow if the delay between two calls is too long.

Example

```
TEST:
  move.l #$CAFECAFE,d1 ; Operand for DIVU.L
  tst.l  $DE0008      ; Reset the Clock-Cycle counter
  divu.l #100,d1      ; Consume some CPU cycles
```

```
    move.l $DE0008,d0    ; D0 = Number of cycles consumed by the DIVU
instruction.
    rts
```

Macros

```
DEBUG EQU 1

SAGA_CLKCNT EQU $DE0008

CLKRESET MACRO
    IFNE DEBUG
        tst.l SAGA_CLKCNT
    ENDC
ENDM

CLKSAVE MACRO
    IFNE DEBUG
        move.l SAGA_CLKCNT, __\1_time
    ENDC
ENDM

CLKADD MACRO
    IFNE DEBUG
        move.l d0, -(sp)
        move.l SAGA_CLKCNT, d0
        add.l d0, __\1_time
        move.l (sp)+, d0
    ENDC
ENDM
```

```
MyRoutine:
    move.l #$CAFECAFE, d1 ; Operand for DIVU
    CLKRESET              ; Reset the Clock-Cycle counter
    divu.l #100, d1       ; Consume some CPU cycles
    CLKADD MyCounter      ; Save the number of cycles in MyCounter
    RTS
```

```
MyCounter: DC.L 0
```

From:
<https://wiki.apollo-accelerators.com/> - **Apollo Accelerators**

Permanent link:
https://wiki.apollo-accelerators.com/doku.php/saga:registers:saga_clock_counter?rev=1464009885

Last update: **2020/08/02 12:37**

