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-- SubModule EOMDriverControlCPL3
-- Created    4/27/2009 3:32:35 PM
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```

```
Library IEEE;
```

```
Use IEEE.Std_Logic_1164.all;
```

```
Use IEEE.Numeric_Std.all;
```

```
entity EOMDriverControlCPL3 is port
```

```
(
    A      : in    std_logic_vector(7 downto 0);
    D      : out   std_logic_vector(15 downto 0)
);
```

```
end EOMDriverControlCPL3;
```

```
-----
architecture Structure of EOMDriverControlCPL3 is
```

```
-- Type Declarations
```

```
type word is range 0 to 65535;
```

```
type rom_type is array (0 to 255) of word;
```

```
-- constant Declarations
```

```
constant rom : rom_type :=
```

```
(4231, 4330, 4431, 4534, 4640, 4748, 4858, 4971, 5087, 5206, 5327,
5451, 5578, 5708, 5841, 5977, 6116, 6259, 6404, 6554, 6706, 6862,
7022, 7186, 7353, 7524, 7700, 7879, 8063, 8250, 8443, 8639, 8840,
9046, 9257, 9473, 9693, 9919, 10150, 10387, 10629, 10876, 11129,
11389, 11654, 11925, 12203, 12487, 12778, 13076, 13381, 13692, 14011,
14337, 14671, 15013, 15363, 15721, 16087, 16462, 16845, 17237, 17639,
18050, 18470, 18901, 19341, 19791, 20252, 20724, 21207, 21701, 22206,
22723, 23253, 23794, 24349, 24916, 25496, 26090, 26698, 27320, 27956,
28607, 29273, 29955, 30653, 31367, 32098, 32845, 33610, 34393, 35194,
36014, 36853, 37711, 38590, 39489, 40409, 41350, 42313, 43299, 44307,
45339, 46395, 47476, 48582, 49713, 50871, 52056, 53269, 54510, 55779,
57079, 58408, 59769, 61161, 62585, 64043, 65535, others => 65535);
```

```
-- Functions
```

```
function get_word (r : in rom_type; i : natural) return natural is
    variable c : word;
begin
    c := r (i);
    return natural(c);
end function get_word;
```

```
-- Signal Declarations
```

```
signal addr : unsigned (7 downto 0);
```

```
begin
```

```
    addr <= unsigned (A);
    D <= std_logic_vector (To_unsigned (get_word (rom, To_integer (addr)), 16));
```

```
end Structure;
```