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1  -----
2  --
3  -- Title       : cpos
4  -- Design      : gray_bin
5  -- Author       : Jason
6  -- Company      : Stony Brook University
7  --
8  -----
9  --
10 -- File         :
11 c:\Users\Jason\Documents\VHDL\gray_to_binary\gray_bin\src\cpos.vhd
12 -- Generated    : Wed Feb 15 18:12:15 2023
13 -- From         : interface description file
14 -- By           : Itf2Vhdl ver. 1.22
15 -----
16 --
17 -- Description :
18 --
19 -----
20 --
21 --{{ Section below this comment is automatically maintained
22 --   and may be overwritten
23 --{entity {cpos} architecture {cpos}}
24
25 library IEEE;
26 use IEEE.std_logic_1164.all;
27
28 entity gray_bin is
29     port(
30         g3 : in STD_LOGIC;
31         g2 : in STD_LOGIC;
32         g1 : in STD_LOGIC;
33         g0 : in STD_LOGIC;
34         b3 : out STD_LOGIC;
35         b2 : out STD_LOGIC;
36         b1 : out STD_LOGIC;
37         b0 : out STD_LOGIC
38     );
39 end gray_bin;
40
41 --}} End of automatically maintained section
42
43 architecture cpos of gray_bin is
44 begin
45
46     -- enter your statements here --
47     b3 <=
48     (g3 or    g2 or    g1 or    g0) and
49     (g3 or    g2 or    g1 or not g0) and
50     (g3 or    g2 or not g1 or    g0) and
51     (g3 or    g2 or not g1 or not g0) and
52     (g3 or not g2 or    g1 or    g0) and

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53      (g3 or not g2 or      g1 or not g0) and
54      (g3 or not g2 or not g1 or      g0) and
55      (g3 or not g2 or not g1 or not g0);
56
57      b2 <=
58      (      g3 or      g2 or      g1 or      g0) and
59      (      g3 or      g2 or      g1 or not g0) and
60      (      g3 or      g2 or not g1 or      g0) and
61      (      g3 or      g2 or not g1 or not g0) and
62      (not g3 or not g2 or      g1 or      g0) and
63      (not g3 or not g2 or      g1 or not g0) and
64      (not g3 or not g2 or not g1 or      g0) and
65      (not g3 or not g2 or not g1 or not g0);
66
67      b1 <=
68      (      g3 or      g2 or      g1 or      g0) and
69      (      g3 or      g2 or      g1 or not g0) and
70      (      g3 or not g2 or not g1 or      g0) and
71      (      g3 or not g2 or not g1 or not g0) and
72      (not g3 or not g2 or      g1 or      g0) and
73      (not g3 or not g2 or      g1 or not g0) and
74      (not g3 or      g2 or not g1 or      g0) and
75      (not g3 or      g2 or not g1 or not g0);
76
77      b0 <=
78      (      g3 or      g2 or      g1 or      g0) and
79      (      g3 or      g2 or not g1 or not g0) and
80      (      g3 or not g2 or not g1 or      g0) and
81      (      g3 or not g2 or      g1 or not g0) and
82      (not g3 or not g2 or      g1 or      g0) and
83      (not g3 or not g2 or not g1 or not g0) and
84      (not g3 or      g2 or not g1 or      g0) and
85      (not g3 or      g2 or      g1 or not g0);
86
87  end cpos;
88

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