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module Frog(
    input MoveUp,
    input MoveDown,
    input In_End_Delay,
    input INIT,
    input Reset_btnC,
    input Framerate,
    input clk,
    input ThreePixPerFrame,
    input FrogBlink,
    input Rungame,
    output Moving,
    output [11:0]Position
);
wire utc1, utc2, dtc1, dtc2, goup, godown, spikeMove;
wire [11:0] frog_position;
wire noMotion = !(MoveUp | MoveDown);
parameter CENTER = 232;
parameter OFFSCREEN_BLINK = 12'd480;

    FDRE #(.INIT(1'b0)) downff (.C(Framerate), .R(godown & Position >= CENTER),
.CE(5 < Position & Position <= 120), .D(1'b1), .Q(godown));
    FDRE #(.INIT(1'b0)) upff (.C(Framerate), .R(goup & Position <= CENTER),
.CE(Position >= 328), .D(1'b1), .Q(goup));

    wire Up_Direction = Rungame & ((MoveUp & !godown) | (MoveDown & goup));
    wire Down_Direction = Rungame & ((MoveUp & godown) | (MoveDown & !goup));

    countUD4L trackerfrg1 (.Up(ThreePixPerFrame&Down_Direction),
.Dw(ThreePixPerFrame&Up_Direction), .LD(INIT | (Rungame & noMotion) |
(Reset_btnC & In_End_Delay)), .Reset(1'b0), .Q(4'b1000), .clk(clk), .UTC(utc1),
.DTC(dtc1), .Qout(frog_position[3:0]));
    countUD4L trackerfrg2 (.Up(ThreePixPerFrame&Down_Direction & utc1),
.Dw(ThreePixPerFrame&Up_Direction & dtc1), .LD(INIT | (Rungame & noMotion) |
(Reset_btnC & In_End_Delay)), .Reset(1'b0), .Q(4'b1110), .clk(clk), .UTC(utc2),
.DTC(dtc2), .Qout(frog_position[7:4]));
    countUD4L trackerfrg3 (.Up(ThreePixPerFrame&Down_Direction & utc1 & utc2),
.Dw(ThreePixPerFrame&Up_Direction & dtc1 & dtc2), .LD(INIT | (Rungame & noMotion) |
(Reset_btnC & In_End_Delay)), .Reset(1'b0), .Q(4'b0000), .clk(clk),
.Qout(frog_position[11:8]));

    assign Position = FrogBlink ? OFFSCREEN_BLINK : frog_position;
    assign Moving = Position != 232 ;
endmodule

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