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function [ img_new ] = Haar_RecurReconstruct( img_comp, n )

    if ( n == 1 )

        img_ll_r0 = img_comp.red.ll;
        img_ll_g0 = img_comp.green.ll;
        img_ll_b0 = img_comp.blue.ll;

    else

        img_compl_r = img_comp.red.ll;
        img_compl_g = img_comp.green.ll;
        img_compl_b = img_comp.blue.ll;

        img_compl = struct( 'red', img_compl_r, 'green',
img_compl_g, 'blue', img_compl_b );

        img_ll = Haar_RecurReconstruct( img_compl, (n-1) );

        img_ll_r0 = img_ll(:, :, 1);
        img_ll_g0 = img_ll(:, :, 2);
        img_ll_b0 = img_ll(:, :, 3);

    end

    img_hh_r0 = img_comp.red.hh;
    img_hl_r0 = img_comp.red.hl;
    img_lh_r0 = img_comp.red.lh;
    %img_ll_r0 = img_comp.red.ll;

    img_hh_g0 = img_comp.green.hh;
    img_hl_g0 = img_comp.green.hl;
    img_lh_g0 = img_comp.green.lh;
    %img_ll_g0 = img_comp.green.ll;

    img_hh_b0 = img_comp.blue.hh;
    img_hl_b0 = img_comp.blue.hl;
    img_lh_b0 = img_comp.blue.lh;
    %img_ll_b0 = img_comp.blue.ll;

    img_r = Haar_Reconstruct( img_hh_r0, img_hl_r0, img_lh_r0,
img_ll_r0 );
    img_g = Haar_Reconstruct( img_hh_g0, img_hl_g0, img_lh_g0,
img_ll_g0 );
    img_b = Haar_Reconstruct( img_hh_b0, img_hl_b0, img_lh_b0,
img_ll_b0 );

    [w,h] = size( img_r );
    img_new = zeros( w, h, 3);

    img_new(:, :, 1) = img_r;
    img_new(:, :, 2) = img_g;

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img_new(:,:,3) = img_b;  
img_new = uint8( img_new );  
end
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