klsb (Calls: 2, Time: 5.788 s)

Generated 20-May-2021 13:29:33 using performance time.
Function in file D:\Matlab\ITC_project\klsb.m
Copy to new window for comparing multiple runs

Parents (calling functions)

Function Name	Function Type	Calls
txt_stego_im	Function	1
im_stego_txt	Function	1

Lines that take the most time

Line Number	Code	Calls	Total Time (s)	% Time	Time Plot	
45	`data=dec2bin(mod(p,2^k),k);`	307740	2.877	49.7%	▆	
17	`d=double(bin2dec(in(ptr:ptr+k-1)));`	307739	1.012	17.5%	▪	
48	`out(i) = string(data);`	307740	0.772	13.3%	▪	
68	`txt(i) = string(txtout(8*(i-1) + 1 : 8*i));`	153870	0.402	6.9%	▪	
70	`txt = char(bin2dec(txt));`	1	0.194	3.3%	▏	
All other lines			0.531	9.2%	▪	
Totals			5.788	100%		

Children (called functions)

Function Name	Function Type	Calls	Total Time (s)	% Time	Time Plot
dec2bin	Function	307742	2.260	39.1%	▅
strjoin	Function	2	0.024	0.4%	
Self time (built-ins, overhead, etc.)			3.503	60.5%	▆
Totals			5.788	100%	

Code Analyzer results

Line Number	Message
38	The value assigned to variable 'p' might be unused.
48	The variable 'out' appears to change size on every loop iteration. Consider preallocating f…
68	The variable 'txt' appears to change size on every loop iteration. Consider preallocating f…

Coverage results

Function listing

```
  Time    Calls    Line
                      1    function output = klsb(k,type,img,in,PX,PY)
                      2
  0.002        2      3        in = [ dec2bin( size(in,2), 32) in ];
                      4
< 0.001        2      5        if type=="encoding"
                      6            %% Encoding
< 0.001        1      7            st=img;
< 0.001        1      8            ptr=1;
< 0.001        1      9            for pl=1:3
< 0.001        3     10                for i=1:length(PX)
  0.023   307741     11                    p = double(img(PX(i),PY(i),pl));
                     12
```

```matlab
      0.017    307741    13                        if(ptr+k>length(in))
    < 0.001         2    14                            break
                         15
      0.014    307739    16                        else
      1.012    307739    17                            d=double(bin2dec(in(ptr:ptr+k-1)));
      0.019    307739    18                            ptr=ptr+k;
      0.056    307739    19                            if(mod(p,2^k)~=d && p<=2^k)
    < 0.001      3129    20                                p=d;
      0.042    304610    21                            elseif(mod(p,2^k)~=d && p>2^k)
      0.036    285266    22                                p=(2^k)*floor(p/(2^k))+d;
      0.016    307739    23                            end
      0.023    307739    24                            st(PX(i),PY(i),pl)=uint8(p);
      0.017    307739    25                        end
      0.019    307739    26                    end
    < 0.001         3    27                end
    < 0.001         1    28                output=st;
                         29
                         30                %% Decoding
    < 0.001         1    31            else
    < 0.001         1    32                i=0;len=0; f=0;
                         33
    < 0.001         1    34                remaining_length = Inf;
                         35
    < 0.001         1    36                for pl=1:3
    < 0.001         3    37                    for j=1:length(PX)
      0.015    307742    38                        p=[];
      0.032    307742    39                        p = double(img(PX(j),PY(j),pl)) ;
                         40
      0.013    307742    41                        if(remaining_length<=0)
    < 0.001         2    42                            break
                         43
      0.013    307740    44                        else
      2.877    307740    45                            data=dec2bin(mod(p,2^k),k);
      0.016    307740    46                            remaining_length=remaining_length-k;
      0.016    307740    47                            i=i+1;
      0.772    307740    48                            out(i) = string(data);
      0.015    307740    49                        end
                         50
      0.018    307740    51                        if f==0
    < 0.001         8    52                            len = len + k;
      0.015    307740    53                        end
                         54
      0.015    307740    55                        if len >= 32 && f==0
    < 0.001         1    56                            f=1;
      0.001         1    57                            L = char(strjoin(out,''));
    < 0.001         1    58                            remaining_length = bin2dec(L(1:32)) - len + 32;
    < 0.001         1    59                            len=0;
      0.013    307740    60                        end
                         61
      0.017    307740    62                    end
    < 0.001         3    63                end
                         64
      0.025         1    65                txtout = char(strjoin(out,''));
                         66
    < 0.001         1    67                for i = 1:(floor(length(txtout)/8))
      0.402    153870    68                    txt(i) = string(txtout(8*(i-1) + 1 : 8*i));
      0.007    153870    69                end
      0.194         1    70                txt = char(bin2dec(txt));
    < 0.001         1    71                output = txt(5:end);
```

< 0.001   2   **72**   end
  0.015   2   **73**   end