Hard metrology of the human visual perception

by

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Preface

Abstract

Kurzfassung

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B. List of Companies

Company: Volvo Cars

Website: `https://www.volvocars.com/se`

Company: The MathWorks, Inc.

Website: `https://www.mathworks.com/`

Company: National Instruments

Website: `https://www.ni.com/`

Company: Tamron

Website: `https://www.tamron.com/`

Company: LUCID Vision Labs

Website: `https://thinklucid.com/`

Company: Thorlabs, Inc.

Website: `https://www.thorlabs.com/`

Company: DIGI International, Inc.

Website: `https://www.digi.com/`

Company: MikroTik

Website: `https://mikrotik.com/`

C. Network setup and configuration

D. Organisation Chart

E. Source Code

E.1. Transmission evaluation

```
function TransmissionEvaluation()
% FUNCTION NAME:
%    TransmissionEvaluation()
%
% DESCRIPTION:
%    Computes the the average intensity of all binary
%        images in a directory selected by the user.
%
% INPUT:
%    None
%
% OUTPUT:
%    None
%
% Created:
%    Author:              Lukas Schwoerer
%        Date:            03.07.2020
%        Version:         V1.0
%

%% Initialize variables
clear all
listcounter = 1;


%% Select image folder and compile image list
path = uigetdir(pwd, 'Select image folder');
dircontent = dir(path);

for i = 1 : length(dircontent)
        if contains(dircontent(i).name, '.bin')

                imagelist(listcounter) = strcat(dircontent(i).
                    folder, "/", dircontent(i).name);
                listcounter = listcounter + 1;

        end
end

```

```
39
40 %% Calculate mean value for all images in imagelist
41 for i = 1 : length(imagelist)
42
43         fid = fopen(imagelist(i),'r');
44     tmpimg = fread(fid,[2048, 2048],'*uint16'); %Read images
           from binary file
45     fclose(fid);
46
47         tmpimg = double(tmpimg)/2^12; %Scale 16bit image value
               into a range from 0-1
48
49         disp(imagelist(i)); %Display image name
50         disp(mean(tmpimg, 'all')); %Display mean intensity
51
52 end
53 end
```