

T10/07-436r0

# Introduction to DFEEYE for 6G SAS

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# DFEEYE

- Detailed description & instructions included in:  
<http://www.t11.org/ftp/t11/member/incoming/07-550v0.pdf>
- Matlab code & SAS-specific input files (CJTPAT & 10m iPass cable) included in the accompanying zip file:  
<http://www.t10.org/ftp/t10/document.07/07-436r0.zip>
  - T11/07-550v0 also included in above zip file
  - Output from provided example is shown on the next slide

# CJTPAT thru 10m iPass

%% MATLAB (R) script to compute the MMSE-DFE slicer input eye diagram %%%%

%% Version: 1.1  
 %% Date: September 24, 2007  
 %% Author: Adam Healey, LSI Corporation

clear variables

%% Define inputs %%%  
 %% sampleFile : Contains exactly "oversampling" samples per symbol. The samples  
 %% must be circularly shifted to align with the symbols in "symbolFile." The  
 %% file format is a single column of chronological numerical samples, in ASCII  
 %% format, with no header or footer  
 %%

%% symbolFile : The file format is a single column of chronological symbols, in  
 %% ASCII format, with no header or footer

% sampleFile = 'PRBS7\_16X.txt';  
 % symbolFile = 'PRBS7\_symbols.txt';

**sampleFile = 'SAS\_CJTPAT\_samples.txt';**  
**symbolFile = 'SAS\_CJTPAT\_symbols.txt';**  
**oversampling = 16;** % samples/symbol, must be even

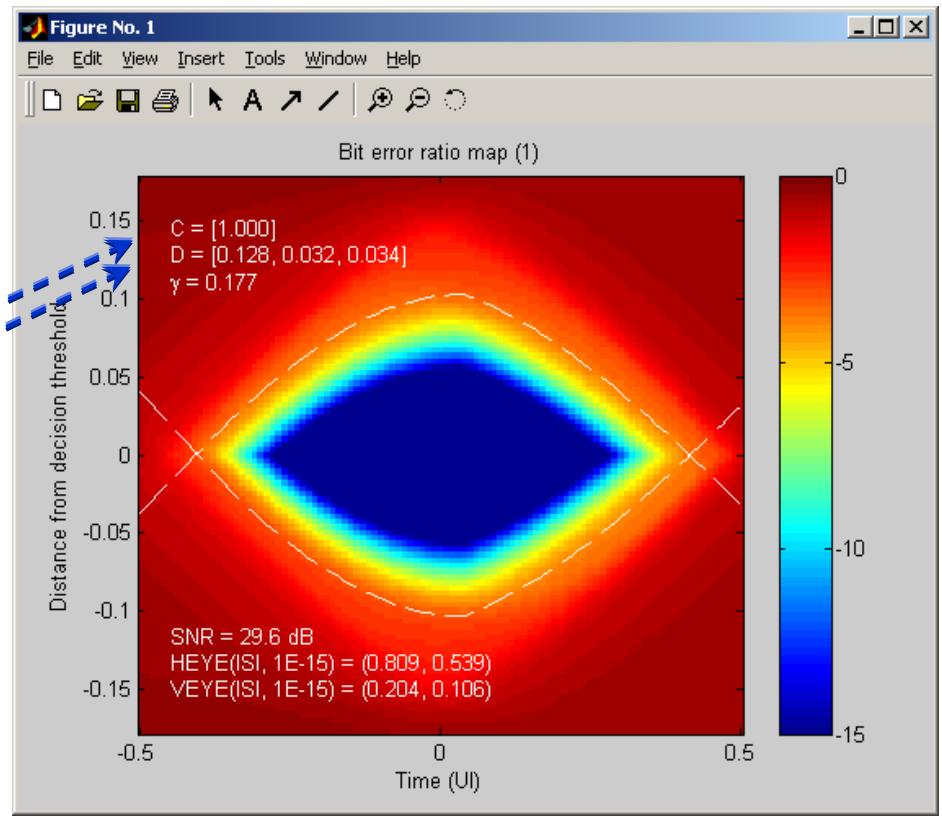
%% Define constants %%%  
 %% Note that T is the symbol period (normalized to 1) and "eqNc" must be 1 or an  
 %% even integer

**ber0 = 1E-15;** % target bit error ratio  
 maxEqDelay = 16; % maximum equalizer delay (symbol periods)  
**eqNc = 1;** % number of feed-forward taps (T/2-spaced)  
**eqNd = 3;** % number of feedback taps (T-spaced)  
 dphi = 1/100; % eye diagram phase step (symbol periods)  
 dvee = 1/200; % eye diagram amplitude step

graphOut = 1; % control graphical outputs  
 % 0 : disable graphical outputs  
 % 1 : bit error ratio map

%% Define stressors %%%  
 %% stressorFile : File format is a column of values, in ASCII format, for each  
 %% stressor, with no header or footer. Each column is to be separated by white  
 %% space. The first row of each column contains the RMS noise amplitude and is  
 %% followed by chronological numerical samples of impulse response sampled at  
 %% T/"oversampling" intervals.

**stressorFile = 'DFEYE\_stressor\_iPass\_10m\_h0Table\_6g0\_16X.txt';**



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