Key for text box color:

Green = Transmitter + Receiver

Red = Receiver only

Blue = Transmitter only

**Tool Files**

Window

**Receiver + Transmitter**

**Transmitter**

Data Summary

All functions under this file generate a series of analysis windows - one for each frame in the tape.

**Receiver**

Library Files

**UTIL Files**

get\_analysis\_type

-takes a source name and returns analysis type of a chart

get\_scan\_parameter\_table

-takes a source name and returns a scan of a parameter table

Process

-this script returned by the function is only valid in the time and distance domain

get\_scale

-takes a source name and returns x0 and x1

analysis\_type

-convert meters to nanoseconds

get\_matrix

-get the row complex freq domain data

get\_selection\_vector

-the selection vector contains ones and zeroes denoting lines that are visible in the source window

select\_cm

-reduce the matrix to only selected rows

Select

-we will need to know where to get titles for the selected vectors. Convert the selection vector into an index vector by selecting from a vector of indexes.

Fft

-convert everything to the time domain

get\_freq\_step

-we need these for scaling purposes

I0 and I1 methods

-calculate the indexes of the bounding window

dI

-need to know ½ the width of the window

z0\_z1

-need to strip out the zeroes in the first FFT. We want to keep everything in the interval [z0..z1]

slice2

-Cf should be reduced back to the original SCAN\_SIZE

get\_selection\_vector

-takes w and returns set

clear\_chart

-takes w and returns reset chart scale

set\_analysis\_type

-takes w, analysis \_type and returns set analysis type

set\_analysis\_parameter\_table

-takes w, AP and returns parameter table of set analysis

set\_option

-takes w, db\_freq, false and returns set option

update\_chart

-takes w and returns an updated chart

End

-when complete this function will return a string which is “Hello, World!”

set\_changed

get\_vector

get\_selection\_vector

get\_title2

deduplicate\_list

make\_window

plot\_data\_source

complex\_vector\_to\_complex\_matrix

-takes input\_vector and returns complex\_matrix

complex\_matrix\_to\_complex

-takes input\_matrix and returns simply complex

complex\_matrix\_to\_complex\_vector

-takes input\_matrix and returns complex\_vector