

# Accessing Microwave Office from Matlab thru COM API

AWRDE may be accessed from Matlab using the COM API. This interface allows users to perform any of the following:

- Access system diagrams, circuit schematics, data files, etc., and modify their content
- Set up and run simulations
- Access data from graphs

Information on controlling AWRDE thru the COM API can be found [here](#). The Mathworks website provides information on how to [create COM objects](#) and accessing [COM methods](#).

An example of how to access AWRDE from Matlab is shown below.

## Matlab code

```
h = actxserver('AWR.MWOffice.14.0'); % Open AWR v14
% h.Visible = false; % Make AWR invisible
% h.Visible = true; % Make AWR visible
% m = h.SystemModels; % Get system models
% m.Exists('PHARRAY'); % Check if PHARRAY exists
% h.Open(ProjectFileName); % Open project

h.Open('C:\Program Files (x86)\AWR\AWRDE\14_release\Examples\16QAM_IQ_Imbalance.emp');

df = h.Project.DataFiles;
sc = h.Project.Schematics;
sd = h.Project.SystemDiagrams;
gr = h.Project.Graphs;

dfnum = df.Count
scnum = sc.Count
sdnum = sd.Count
grnum = gr.Count

hp = h.Project; % get project object
hgs = hp.Graphs; % get graphs collection object
hg2 = hgs.Item(1); % get object for graph 1
hg1 = hgs.Item('EVM'); % get object for graph 'EVM'
hts = hg1.Traces; % get traces collection object
ht1 = hts.get('Item',1); % get object for trace 1
hal = hg1.Axes.get('Item',1); % get object for axis 1

hp.Simulator.RunStop; % run simulator to get the trace data

hml = hg1.Measurements.get('Item',1); % get object for measurement 1
tv1 = hml.TraceValues(1); % get trace values for measurement 1

tv1
```