Matlab / Simulink

Get or set parameters of objects

There are various ways to read/write or get/set the values of parameters of objects.

Option1 for objects within Simulink for example

Suppose a simulink model is saved under the name BlueBox_ClosedLoop.slx

```
% To find the parameters of the block 'PID Controller' in this Simulin
k model
get_param('BlueBox_ClosedLoop/PID Controller','DialogParameters')

% To get the current value of the parameter called 'P'
get_param('BlueBox_ClosedLoop/PID Controller','P')

% To set the value of an parameter use
set_param('BlueBox_ClosedLoop/PID Controller','P',num2str(Kp))
% NB: you have to use strings in this case to pass a numerical value
```

Option 2 for variables in the Matlab workspace

Suppose you have an variable called Proces denoting a transfer function of the type 1x1 tf

```
% To find the parameters of the transferfunction called Proces
get(Proces)

% To get the current value of the parameter called 'IOdelay'
get(Proces,'IODelay')             % or use the command: Proces.IODelay

% To get the coefficients of the Numerator you have to change somethin
g, because
get(Proces,'Numerator')           % or use the command: Proces.Numerat
or
% will give you a result looking something like:  ans = [1x4 double]
% to access the actual coefficients do:
Proces.Numerator{1}
% In general use the construct: <Object>.<parameter>{<element number>}

% Set values for parameters goes like this
set (Proces,'IODelay',1)          % or use the command: Proces.IODelay
=1
% NB: Here numbers are used and not strings to transfer the values for
 numbers
```

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