

## **Background and Equations**

None required.

## **Operational Description**

In this demonstration, the color of an unlabeled panel changes in response to radio button selections. The color change happens only after a “Do It” button is clicked. The callback function for the button checks the state of each radio button to determine the color to make the panel.

## **User Interface Description**

A button group (colorGroup) containing three radio buttons (redRadio, greenRadio, blueRadio). Note that GUIDE displays controls using black as the foreground color regardless of the specified foreground color. However, the specified color is used in the running program.

A panel (colorPanel) that changes color in response to radio button selections. Note the String for this control was left blank and the font size was set to 0 to create an unbroken border around it.

A button (doItButton) that causes the color to be changed.

## **Algorithms**

### *doItButton\_Callback*

```
if redRadio Value is 1
    Set the colorPanel background to red.
elseif greenRadio Value is 1
    Set the colorPanel background to green
elseif blueRadio is 1
    Set the colorPanel background to blue.
end if
```

## Source Code

```
function varargout = delayedGroupDemo(varargin)
% DELAYEDGROUPDEMO M-file for delayedGroupDemo.fig
%
% See my Delayed Color Radio Group Demo documents(DelayedGroupDemo.doc)
% for more information.
%
% Created by Dr. C. S. Tritt
% Last revised: 1/24/07 (version 1.0)
%
% See also: GUIDE, GUIDATA, GUIHANDLES

% Copyright 2002-2003 The MathWorks, Inc.

% Edit the above text to modify the response to help delayedGroupDemo

% Last Modified by GUIDE v2.5 24-Jan-2007 14:33:03

% Begin initialization code - DO NOT EDIT
gui_Singleton = 1;
gui_State = struct('gui_Name',       mfilename, ...
                  'gui_Singleton',  gui_Singleton, ...
                  'gui_OpeningFcn', @delayedGroupDemo_OpeningFcn, ...
                  'gui_OutputFcn',  @delayedGroupDemo_OutputFcn, ...
                  'gui_LayoutFcn',  [] , ...
                  'gui_Callback',    []);
if nargin && ischar(varargin{1})
    gui_State.gui_Callback = str2func(varargin{1});
end

if nargout
    [varargout{1:nargout}] = gui_mainfcn(gui_State, varargin{:});
else
    gui_mainfcn(gui_State, varargin{:});
end
% End initialization code - DO NOT EDIT

% --- Executes just before delayedGroupDemo is made visible.
function delayedGroupDemo_OpeningFcn(hObject, eventdata, handles,
varargin)
% This function has no output args, see OutputFcn.
% hObject    handle to figure
% eventdata  reserved - to be defined in a future version of MATLAB
% handles    structure with handles and user data (see GUIDATA)
% varargin   command line arguments to delayedGroupDemo (see VARARGIN)

% Choose default command line output for delayedGroupDemo
handles.output = hObject;

% Update handles structure
guidata(hObject, handles);

% UIWAIT makes delayedGroupDemo wait for user response (see UIRESUME)
% uiwait(handles.figure1);
```

```

% --- Outputs from this function are returned to the command line.
function varargout = delayedGroupDemo_OutputFcn(hObject, eventdata,
handles)
% varargout    cell array for returning output args (see VARARGOUT);
% hObject     handle to figure
% eventdata   reserved - to be defined in a future version of MATLAB
% handles     structure with handles and user data (see GUIDATA)

% Get default command line output from handles structure
varargout{1} = handles.output;

% --- Executes on button press in doItButton.
function doItButton_Callback(hObject, eventdata, handles)
% hObject     handle to doItButton (see GCBO)
% eventdata   reserved - to be defined in a future version of MATLAB
% handles     structure with handles and user data (see GUIDATA)

if get(handles.redRadio, 'Value') == 1
    set(handles.colorPanel, 'backgroundColor', [1 0 0]);
elseif get(handles.greenRadio, 'Value') == 1
    set(handles.colorPanel, 'backgroundColor', [0 0.7 0]);
elseif get(handles.blueRadio, 'Value') == 1
    set(handles.colorPanel, 'backgroundColor', [0 0 1]);
end

```