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General Parameters

```
%Resultfile directory
resultdir = './Results';

runs = 1;

%Stimulus parameters
fixRadius = 0.25; %fixation dot radius in degrees
fixColor = [1 0 0];

screenDiagonalSize = 81.28; % screen diagonal size in cm
viewingDistance = 100; %subject distance to screen in cm
```

Paradigm Timing

List of conditions (DO NOT EDIT)

```
conditionNone = 0;
conditionStim = 1;
conditionEnd = 2;

% paradigm 0
% for test triggers (no fMRI)
% testParadigm = [
%     0    conditionNone;
%     3    conditionStim;
%     5   conditionNone;
%     7   conditionStim;
%     9   conditionNone;
%     11   conditionEnd;
%     ];
firstBaselineEnd = 3;
numCycles    = 16;
cycleStim   = 1;
cycleBaseline  = 1;

testParadigm = [
    0 conditionNone;
    firstBaselineEnd conditionStim;

 cumsum(repmat([cycleStim;cycleBaseline],numCycles,1))+firstBaselineEnd
 repmat([conditionNone;conditionStim],numCycles,1)
    ];
```

```
% paradigm 1
% for testing with fMRI
runParadigmTest = [
    0    conditionNone;
    20   conditionStim;
    30   conditionNone;
    42   conditionStim;
    56   conditionNone;
    72   conditionEnd;
    ];

% paradigm 2
% for running with fMRI
% 15 volume baseline
% then 16 cycles of 10 volumes stimulus then 12 baseline
firstBaselineEnd = 18;
numCycles    = 16;
cycleStim   = 12;
cycleBaseline  = 12;

runParadigmFinal = [
    0 conditionNone;
    firstBaselineEnd conditionStim;

 cumsum(repmat([cycleStim;cycleBaseline],numCycles,1))+firstBaselineEnd
 repmat([conditionNone;conditionStim],numCycles,1)
    ];

runParadigmFinal(end,2)=conditionEnd;
runParadigmFinal(end,1)=runParadigmFinal(end,1)+5;
```

Generate stimulus that will show

order of stimulus presentation:

```
stimRunIndices(:,:,1) = [
    2, 3, 6, 7, 8, 11, 12, 14, 15, 16, 18, 19, 20, 22, 23, 24;
];

stimRunIndices(:,:,2) = [
    24, 23 ,22, 20, 19, 18, 16 ,15, 14, 12, 11, 8, 7, 6, 3, 2;
];

% stimRunIndices(:,:,3) = [
%     9, 10, 11, 12, 13, 14, 15, 16, 1, 2, 3 ,4 ,5, 6, 7, 8;
% ];
%
% stimRunIndices(:,:,4) = [
%     8, 7, 6, 5, 4, 3, 2, 1, 16, 15, 14, 13, 12, 11, 10, 9;
% ];
```

```
% array of stimulus objects
% if lesss stimulus objects created than stimulus shown in paradigm,
% stimulus objects will be presented starting from begining again

generateStimulus = @generateStim;

function stim = generateStim(paradigmNumber)
    % TODO switch to array (not cell array) and make interface
    switch paradigmNumber
        case {0,1}
            GratingStimulus1
            stim{1} = CheckerPulseStimulus(stimParams, 2);
            GratingStimulus2
            stim{2} = CheckerPulseStimulus(stimParams, 2);
            GratingStimulus3
            stim{3} = CheckerPulseStimulus(stimParams, 2);
            GratingStimulus4
            stim{4} = CheckerPulseStimulus(stimParams, 2);

            GratingStimulus1
   stim{5} = CheckerFlickerStimulus(stimParams,8);
   GratingStimulus2
   stim{6} = CheckerFlickerStimulus(stimParams,2);
   GratingStimulus3
   stim{7} = CheckerFlickerStimulus(stimParams,8);
   GratingStimulus4
   stim{8} = CheckerFlickerStimulus(stimParams,2);

            GratingStimulus5
            stim{9} = CheckerPulseStimulus(stimParams, 2);
            GratingStimulus6
            stim{10} = CheckerPulseStimulus(stimParams, 2);
            GratingStimulus7
            stim{11} = CheckerPulseStimulus(stimParams, 2);
            GratingStimulus8
            stim{12} = CheckerPulseStimulus(stimParams, 2);

   GratingStimulus5
   stim{13} = CheckerFlickerStimulus(stimParams, 8);
   GratingStimulus6
   stim{14} = CheckerFlickerStimulus(stimParams, 2);
   GratingStimulus7
   stim{15} = CheckerFlickerStimulus(stimParams, 8);
   GratingStimulus8
   stim{16} = CheckerFlickerStimulus(stimParams, 2);

            GratingStimulus9
            stim{17} = CheckerPulseStimulus(stimParams, 2);
            GratingStimulus10
            stim{18} = CheckerPulseStimulus(stimParams, 2);
            GratingStimulus11
            stim{19} = CheckerPulseStimulus(stimParams, 2);
            GratingStimulus12
            stim{20} = CheckerPulseStimulus(stimParams, 2);
```

```
         GratingStimulus9
stim{21} = CheckerFlickerStimulus(stimParams,8);
GratingStimulus10
stim{22} = CheckerFlickerStimulus(stimParams,2);
GratingStimulus11
stim{23} = CheckerFlickerStimulus(stimParams,8);
GratingStimulus12
stim{24} = CheckerFlickerStimulus(stimParams,2);
     case 2
         GratingStimulus1
         stim{1} = CheckerPulseStimulus(stimParams, 2);
         GratingStimulus2
         stim{2} = CheckerPulseStimulus(stimParams, 2);
         GratingStimulus3
         stim{3} = CheckerPulseStimulus(stimParams, 2);
         GratingStimulus4
         stim{4} = CheckerPulseStimulus(stimParams, 2);

         GratingStimulus1
stim{5} = CheckerFlickerStimulus(stimParams,8);
GratingStimulus2
stim{6} = CheckerFlickerStimulus(stimParams,2);
GratingStimulus3
stim{7} = CheckerFlickerStimulus(stimParams,8);
GratingStimulus4
stim{8} = CheckerFlickerStimulus(stimParams,2);

         GratingStimulus5
         stim{9} = CheckerPulseStimulus(stimParams, 2);
         GratingStimulus6
         stim{10} = CheckerPulseStimulus(stimParams, 2);
         GratingStimulus7
         stim{11} = CheckerPulseStimulus(stimParams, 2);
         GratingStimulus8
         stim{12} = CheckerPulseStimulus(stimParams, 2);

GratingStimulus5
stim{13} = CheckerFlickerStimulus(stimParams, 8);
GratingStimulus6
stim{14} = CheckerFlickerStimulus(stimParams, 2);
GratingStimulus7
stim{15} = CheckerFlickerStimulus(stimParams, 8);
GratingStimulus8
stim{16} = CheckerFlickerStimulus(stimParams, 2);

         GratingStimulus9
         stim{17} = CheckerPulseStimulus(stimParams, 2);
         GratingStimulus10
         stim{18} = CheckerPulseStimulus(stimParams, 2);
         GratingStimulus11
         stim{19} = CheckerPulseStimulus(stimParams, 2);
         GratingStimulus12
         stim{20} = CheckerPulseStimulus(stimParams, 2);
```

```
            GratingStimulus9
    stim{21} = CheckerFlickerStimulus(stimParams,8);
    GratingStimulus10
    stim{22} = CheckerFlickerStimulus(stimParams,2);
    GratingStimulus11
    stim{23} = CheckerFlickerStimulus(stimParams,8);
    GratingStimulus12
    stim{24} = CheckerFlickerStimulus(stimParams,2);
     end
end
```

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