Inspection Time Test (IT-Test)

In this test two vertical lines of different length are draw very briefly. The shorter line is masked after a variable delay by making both lines equal in length. Participants are instructed to choose the longest. The masking delay is adapted a staircase procedure. This version also includes some funny feedback (underwater fish with bubbles.) The script will test if the actual refresh rate is about 100Hz (ie. each display frame will be refreshed every 10 milliseconds.) Responses can be entered by using the 'z' (=left) and 'm' (=right) keys on a regular keyboard. For accurate response time measurement you can also an external response box that is connected through the parallel printer port.

Staircase algorithm used:
The stimulus duration (i.e. the number of display frames on a CRT monitor) is increased or decreased with a specific number (=stepsize) according to response accuracy. On each wrong response the number of frames is increased with the current stepsize-value. However, the number of frames is only decreased with stepsize-value when a fixed number of consecutive correct responses are detected (currently set to 4.) The step size itself is also modified. The experiment starts with a relative large value and is slowly decreased to a minimal step size during the test. This is done by keeping a so called 'reversal' count. A reversal occurs when: a) the current frame-count is larger then the previous frame-count when a correct sequence of (4) responses are detected; or b) when the current frame-count is smaller then the previous frame-count when an incorrect response is detected. In other words: a reversal happens when sequence of increasing display durations is about to decrease, or vice versa. The number of reversals is used to determine the stepsize: initially the stepsize will be 4 (=40 milliseconds at 100Hz). After 2 reversals the stepsize is reduced to 2 and after 4 reversals it will reach its smallest possible value of 1. This step-size and frame-count adaptation will take care of a slowly optimizing display duration for a given subject. The test will automatically abort after 15 reversals or 96 trials, whichever comes first. The first 3 trials ware considered practice or warm-up trials and have predefined frame counts.

Along with the default output values, the following variables are stored explicitly to simplify SPSS translation of the output:
TargetPiDuration: Configured stimulus duration
PiDuration: Actual stimulus duration: time between stimulus onset and mask onset
RT: response time
ACC: response accuracy
Reversals: number of reversals so far
FrameCount: current frame-count (=number of display refreshes)
Type: L(eft) or R(ight)

Techniques used:
Variable stimulus duration
Input accepted during several E-Prime objects.
Customized drawing of bitmaps (stacked fishes as feedback)
Customized (early) list termination.