

ActiveSTIM 2.18 Technical Specification

General

Operating system:	Windows 95 or later
Stimulus source:	Bitmap files
Drawing technology:	DirectDraw 5 or later
Application control:	ActiveX (COM)
Digital IO:	National Instruments digital boards
Documentation:	90 pages, including a programming tutorial

Graphics

Graphic modes:	All modes supported by the system
Color coding depth:	8, 16 and 32 bit
Palette selection:	YES (8 bit color depth)

Stimulus presentation

Maximum number of bitmap images:	32768
Maximum number of films:	32768
Maximum number of scripts:	2048
Maximum script size:	unlimited
Film construction:	concatenated bitmap files
Maximum film size:	unlimited
Bitmap operations:	Position, Show, Hide, Smooth move
Film operations:	Position, Show, Stop, Speed, Frame change

Temporal accuracy

Stimulus events:	Screen refresh rate
Alignment of stimulus events and output TTL pulses	< 5 μ s
Response time to TTL pulses:	
IO Dedicated	< 5 μ s
Updating stimuli	1 ms
Accuracy of time measurement:	
IO Dedicated	< 10 μ s
Updating stimuli	~1 ms

Client control

ActiveX interface:	27 functions, 6 read values, 3 set values
Remote control over LAN:	YES (Client-Server through DCOM)
Tested environments for ActiveX control demos:	Matlab, LavVIEW, Borland Builder C++, Visual C++, JavaScript, Visual Basic, Borland Delphi

Digital IO

Maximum number of ports used: 3 (output TTL, input TTL, output label)
Duration of generated TTL pulses: 1 ms \pm 5 μ s
Setup: Automatic IO board detection, built in test utility

Recommended hardware

Processor: 700 MHz or faster, fast data bus
RAM: 128 MB or more
Hard disk space: 300 MB (full installation)
Graphic card: DirectDraw support, large RAM
Digital IO board: National Instruments PCI-6503

Debugging

Log file: Invoked functions, screen frames, parameters
Onscreen monitoring: Loaded images, Drawing/idle time, Frame skips,
Application state, IO board state, File path, Label.
Browsing loaded images: Bitmaps, Films, Palettes