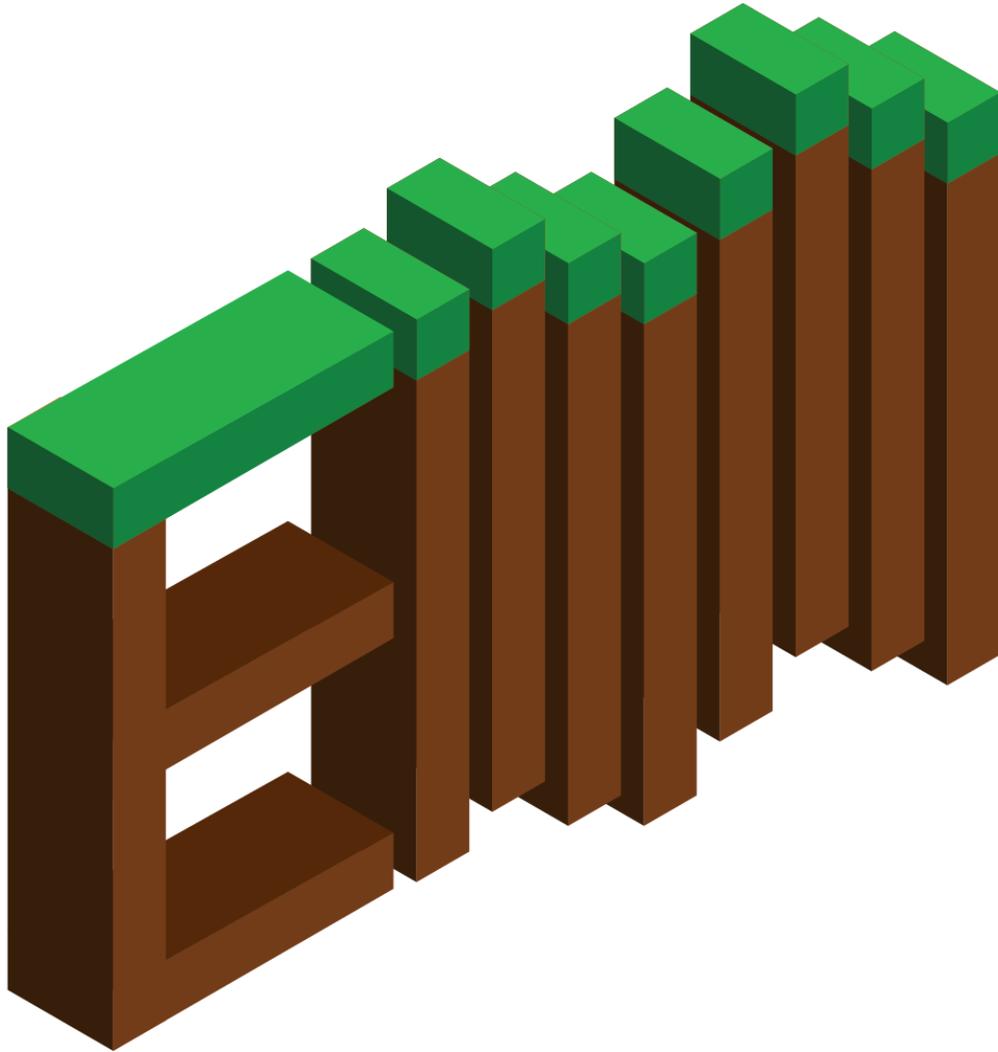


Team Earthquake Guide

*Shockwave Unofficial Documentation and XDK Director
Properties*



File Types

Windows

File Extensions

- Projector (*.EXE)
- Projector Skeleton (*.SKL)
- Director Movie (*.DIR)
- Protected Director Movie (*.DXR)
- Shockwave Movie (*.DCR)
- Director Cast (*.CST)
- Protected Director Cast (*.CXT)
- Shockwave Cast (*.CCT)
- Macromedia Movie (*.MMM)
- Shockwave Export File (*.DRT)
- Video JAVA Resource Data (*.DJR)
- Xtra-Package (*.W32)
- Windows Xtra (*.X32)
- Mac PowerPC Xtra (*.PPC)
- Mac OS X Xtra (*.CARB)
- Macromedia Xtra Cache File (*.MCH)
- Shockwave 3D Asset Model File (*.W3D)
- Shockwave Audio (*.SWA)
- Graphic Data (*.FGD)
- Profile (*.PRF)

Mac

<http://www.zeusprod.com/technote/filetype.html>

Resource Types

- Adobe Director for Mac Movie (MV85)
- Director 4.0 DIR Movie File (MV93)
- Adobe Director 5 for Mac Movie (MV95)
- Adobe Director 5 for Mac Movie (M!95)
- Director 5 Resource (DsJt)
- Xtra-Package (XTRA)
- Various Data (MMDR)
- Buddy API Xtra File (RSRS)

Creator Signatures

- Director 4.0 Application (MD93)
- Director 5 (MD95)
- Xtra File (Xown)

Director Import Types

- Windows Bitmaps (.BMP,.DIB)
- Windows Metafiles (.WMF)
- Palettes (.PAL)
- Sounds (.WAV,.AIF)
- Director movies (.DIR)
- Digital Video (.MOV, .AVI)
- Macintosh PICTs (.PCT, .PIC)
- TIFF files (.TIF)
- Encapsulated Postscript (.EPS)
- PC Paintbrush files (.PCX)
- GIF files (.GIF)
- Photo CD files (.PCD)
- Animator Movies (.FLC, .FLI)
- MacPaint files (.PNT)
- QT Compressed PICT's (.JPG)

Director for Windows will export Bitmap (.BMP) files.

Director for Macintosh will export PICT or MOV (QuickTime) files.

Director Movie/Director Protected Movie File Format Outline

The Director Movie/Protected Director Movie File Formats are similar to the Shockwave Movie File Format used by Adobe Director and Shockwave. The XDK documents Properties and Functions. The eventual plan is to write an application that can export this tree structure.

This does not cover RIFF Macromedia Projects (RMMP,) which are produced by Macromedia Director 3 and under, but share a similar structure in a RIFF container.

Note that these ChunkIDs are [Mac Creator Signatures and File type codes](#) .

Text in bold has a clipboard type (i.e. the ChunkID officially given to it by Macromedia is known for certain.)

The last four bytes of a Projector are the absolute address of where it begins.

More:

<https://docs.google.com/document/d/1jDBXE4Wv1AEga-o1Wi8xtlNZY4K2fHxW2Xs8RgARrqk/edit?usp=sharing>

NOTE: THIS TABLE IS COMPLETELY WRONG AND OUT OF DATE AND I NEED TO CHANGE IT

- Projector (PJ01, Director 8.0+?)
 - Application (RIFX/XFIR: APPL)
 - Initial Map (imap)
 - Memory Map (mmap)
 - Application Files (File)
 - Director Movie/Cast File (RIFX/XFIR: MV93/MC93)
 - Initial Map (imap)
 - Memory Map (mmap)
 - Keys Table (KEY*)
 - Configuration (DRCF/VWCF)
 - **Score** (VWSC)
 - **Labels** (VWLB)
 - FileInfo (VWFI)
 - **CastInfo** (VWCI/Cinf)
 - ??? (VWtk)
- Required Component Linkage (XTRI, Director 5.0+)
- Font Xtra Map (FXmp)
- Cast Properties (MCsL, Director 5.0+)
- **Cast/Cast Database** (SCVW/CAS*)
 - **CastMember Properties** (CAST)
 - Thumbnail (Thum)
- Bitmap (BITD/DTIB/ALFA)
- Film Loop (SCVW)
- **Field Castmember** (STXT)
- **Palette** (CLUT)
- **Pict** (PICT)
- **Sound/Sound Header/Sound Samples/Cuepoints** (snd /sndH/sndS/cupt)
- **Button** (STXT)
- **Shape** (XMED)
- **Movie** (SCVW)

- **QuickTime** (MooV)
 - Lingo Context/Lingo Names/Lingo Script (Lctx/Lnam/Lscr)
 - **Text Castmember** (RTE0/RTE1/RTE2, Director 5.0+)
 - **OLE Scrap** (OLED, Director 5.0+)
 - **Transition** (CTrn, Director 5.0+)
 - **Xtra CastMember** (XMED, Director 5.0+)
- Copied to Clipboard (ccl)
 - Sort Order (Sord)
 - Version (VERS)
 - Score References (SCRF)
 - Favorite Colors (FCOL)
 - Guides and Grid (GRID)
 - Director Compressed Movie/Cast (RIFX/XFIR: FGDM/FGDC)
 - File Version (Fver)
 - File Compression Types (Fcdr)
 - Initial Load Segment (ILS)
 - AfterBurner Map (ABMP)
 - ??? (FGEI)
 - *Same format as Memory Map*
 - Required Component (RIFF: Xtra, Director 5.0+)
 - Required Component File (FILE, Director 5.0+)
 - Application List (List)
 - Application Dictionary (Dict)

Chunk ID Clipboard Types

Updated to match Director 8.5 (which uses the same ChunkIDs as Director 7.0.) Note that these are Clipboard Types, so some may not exist in movies.

- OLED - OLE Scrap
- VWAT - Action
- VWEV - Event
- VWBI - Behaviour
- MOVI - Movie
- BUTT - Button
- SHAP - Shape
- SCRI - Script
- TXTS - Field Castmember
- moov - Digital Video
- snd - Sound
- PICT - Pict
- CLUT - Palette
- CPal - Palette segment
- XOBJ - XObject

- SCVW - Score
- CMST - Cast
- VWCI - CastInfo
- RGPT - Reg Point
- VWLB - Labels
- PICR - Picture Frame
- CTrn - Transition
- XMED - Xtra CastMember
- TEXT - Text String
- RTE0 - Text Castmember
- RTES - Text Info
- RTF - Rich Text Format
- LASO - Bitmap Info
- sndH - Sound Header
- sndS - Sound Samples
- cupt - Cue Points
- ediM - Editable Media
- CRGN - Score Region
- SSET - Set Data

Reference

Name	Description	Chunk Name	Director Version
Portable Executable	Shockwave Projectors are used to play back movies.	MZ	N/A
Projector	Address of the Application Container	PJ01	Director 8.0+?
Application	Includes Shockwave Movies, Required Components (Xtras,) and their filenames	APPL	
Application Files	Positions and sizes of Shockwave Movies and Required Components (Xtras)	File	

Movie	A movie can have several casts, but each movie has only one score.	MV93	
Initial Map	Points to Memory Map and can have Memory Map chunk version, must be the first chunk	imap	
<ul style="list-style-type: none"> • Memory Map • AfterBurner Map 	Map which has the directory which indexes positions, lengths, flags, and cast member number locks of memory handles of all chunks in a Movie - may be named after the Unix function of the same name, must be the second chunk	<ul style="list-style-type: none"> • mmap • ABMP • FGEI 	
Keys Table	<p>Associates multiple chunks with a owner/owned relationship, must be the third chunk</p> <p>Note: this chunk is not immediately loaded and is only used when loading something else e.g. cast member types, and the required chunks are always bound to 1024 (even if another chunk is there.) For example if a bitmap cast member is the 1024th Memory Map entry both a Bitmap and the required chunks</p>	KEY*	

	are bound to it and based on context Director will only search for specific chunks bound to owners. Must be sorted in numerical order.		
Required Component Linkage	Titles and Unique IDs of Required Components (Xtras) in the form of a VList	XTR1	Director 5.0+
Font Xtra Map	INI File with font names	FXmp	
Cast Properties	Names and properties of Cast Libraries in the Movie in the form of a VList with INT16s	MCsL	Director 5.0+
Cast Database	Indices in the Memory Map of all Cast Member Properties for a Cast Library	CAS*	
Cast Member Properties	Contains properties that apply to Director cast members and their types. Uses an FArray and VList for member properties and a different buffer for type properties.	CASt	
Bitmap	Static bitmap image of any pixel depth	<ul style="list-style-type: none"> ● BITD ● DTIB ● ALFA ● ediM 	
Film Loop	Looped section of Director score (mini, embedded,	SCVW	

	non-interactive movie)		
Styled Text	Block of styled text	STXT	
Palette	Color Look-Up Table (CLUT), associated with bitmap cast members	CLUT	
Picture	Macintosh PICT (metafile-like) object	PICT	
Sound	Sound chunk (can be various sample rates/sizes, compressed, looped, and so on)	<ul style="list-style-type: none"> • snd • sndH • sndS • cupt • ediM • XMED 	
Button	Simple button, created with the Director Tools palette	<ul style="list-style-type: none"> • STXT • BUTT 	
Vector Shape	Simple shape (square, oval, or line; filled or unfilled) created with Tools Note: uses Flash	XMED	
Movie	Linked (external) fully-interactive Director movie	SCVW	
Digital Video	QuickTime or AVI movie	<ul style="list-style-type: none"> • MooV • XMED 	
Script	Lingo script	<ul style="list-style-type: none"> • Lctx • Lnam • Lscr 	
Rich Text (RTF)	Block of Rich Text	<ul style="list-style-type: none"> • RTE0 • RTE1 • RTE2 	Director 5.0+
OLE	Microsoft OLE object	<ul style="list-style-type: none"> • OLED • XMED 	Director 5.0+

Transition	Transition and associated properties	<ul style="list-style-type: none"> • CTrn • XMED 	Director 5.0+
Thumbnail	A BITD compressed thumbnail for a Cast Member.	Thum	
CastInfo	Info on loading casts.	Cinf	
Configuration	<p>Contains movie/player properties, including version information and stage size. Defines whether or not a movie is "protected."</p> <p>Note: DRCF replaced VWCF after Director 6.0, but they are identical chunks, and VWCF may be used in older or newer movies while DRCF can only be used in newer movies. VW stands for VideoWorks while DR stands for Director.</p>	<ul style="list-style-type: none"> • DRCF • VWCF 	
Score	A movie's score is made up of frames, sounds, and sprites in sprite channels.	VWSC	
Labels	Frame Labels as strings.	VWLB	
FileInfo	File Information as strings.	VWFI	
Required Component	Xtras are code extensions to Adobe applications	Xtra	

	such as Director and Authorware. Developed using the Macromedia Open Architecture API.		
Application List	?	List	
Application Dictionary	Dictionary of filenames in an Application.	Dict	

Director Properties

These are taken from the Macromedia XDK. It is not currently known where all this information exists in the movie files, just that it must exist somewhere, and is a good reference guide for values to keep an eye out for when inspecting the movie files. It's possible some of these variables are not stored in the movie files but are automatically generated upon opening them.

Cast Properties

Symbol	Type	Get/Set	Description	Notes
name	string	G/S	Author-defined name of cast (!= filename)	User sets in Cast Properties dialog
pathName	string	G/S	Full pathname of cast. Set allowed only for linked casts	Setting this swaps in new linked cast on-the-fly
preloadMode	integer	G/S	Cast preload mode: 0 = none, 1 = before 1st frame, 2 = after first frame	
memberCount	integer	G	The number of occupied cast member slots in the cast	Does not include "empty" cast member slots"
minMember	integer	G	The index of the first occupied cast member slot	

maxMember	integer	G	The index of the last occupied cast member slot	
<i>Authoring-only</i>				
selection	linear list	G/S	List indicating current cast selection	List of lists. Each sublist specifies a continuous range of selected cast members, for example [[1, 5], [8, 12], [15,15]]

Notes

The selection property provides a list of lists describing selected thumbnails in the cast. Each cast maintains its own selection. Each sublist contains two elements, integers for the "startRun" and "endRun" of a contiguous range of selected cast members. To find the active cast at author time, use the "activeCast" movie property. The maxMember property gives the same results as using the scripting expression `castlib.member.count`. There are not simple scripting properties equivalent to the `memberCount` or `minMember` properties provided by the Cast interface.

Cast Member Properties

General Cast Member Properties

These common properties apply to Director cast members, including both internal and Xtra cast member types.

Symbol	Type	Get/Set	Description	Notes
name	string	G/S	User-defined name of the cast member	
size	integer	G	Memory currently occupied by cast member (in bytes)	
castType	symbol	G	Type of cast member returned as symbol.	Using "castType", text fields are returned as type #text (for Director 4.0 compat.)

type	symbol	G	Type of cast member returned as symbol.	Using "type", text fields are returned as #field (Director 5.0 naming)
scriptText	string	G/S	The text of the cast member script	
modified	integer	G/S	0 = not modified since last save, 1 = props or media modified	
loaded	integer	G/S	0 = unloaded, 1= load. Setting to 0 unloads cast member, setting to 1 loads it	
fileName	string	G/S	Full pathname of linked cast member, only valid for linked castMems, setting changes link on-the-fly	
purgePriority	integer	G/S	0=never, 1=last, 2=next, 3=normal	
number	integer	G	Integer repetition of castMemRef (high 16-bits = castLibIndex - 1)	
member	castMem	G	CastMemRef of cast member	
width	integer	G	Width of cast member's default rectangle	
height	integer	G	Height of cast member's default rectangle	
rect	rect	G/S	Cast member's default rectangle; set only allowed for text field	

hilite	integer	G/S	0=not hilighted, 1=highlighted	
regPoint	point	G/S	Registration point for cast member. Currently can only set for bitmaps, returns (0,0) for all others	

Cast Type

The "castType" property of a cast member represents the type of the cast member. The valid BUILT-IN cast member type symbols are:

Name	Description
#bitmap	Static bitmap image of any pixel depth
#filmLoop	Looped section of Director score (mini, embedded, non-interactive movie)
#text	Block of styled text
#palette	Color Look-Up Table (CLUT), associated with bitmap cast members
#picture	Macintosh PICT (metafile-like) object
#sound	Sound chunk (can be various sample rates/sizes, compressed, looped, and so on)
#button	Simple button, created with the Director Tools palette
#shape	Simple shape (square, oval, or line; filled or unfilled) created with Tools
#movie	Linked (external) fully-interactive Director movie
#digitalVideo	QuickTime or AVI movie
#script	Lingo script (in styled text form)
#richText	Block of Rich Text (new to Director 5.0; includes special formatting information)
#OLE	Microsoft OLE object (new to Director 5.0)

#transition	Transition and associated properties (new to Director 5.0)
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In addition, other cast member types can be registered by Sprite and Transition Xtras. These types can be obtained using the `IMoDrPlayer` methods such as `GetCastMemTypeCount()` and so on.

Bitmap Cast Member Properties

Symbol	Type	Get/Set	Description	Notes
depth	integer	G	Pixel depth of bitmap (1,2,4,8,16,32)	
palette	integer	G/S	Palette of cast member as integer. Negative numbers indicate built-in palettes, positive numbers indicate cast-based palette	
paletteRef	castMem/symbol	G/S	Palette of cast member as <code>castMemRef</code> (cast-based palette) or symbol (built-in palette)	
maskMember	castMem	G	<code>CastMemRef</code> of cast member to be used as mask if mask ink applied	

Button Cast Member Properties

Symbol	Type	Get/Set	Description	Notes
text	string	G/S	The characters in the text field (null-terminated)	
textStyle	string	G/S	The styles used in the text field; comma-delimited, combination of: "bold", "italic", "underline", "outline", "shadow", "condense", and "extend"	
textFont	string	G/S	The font of the entire text field	
textHeight	integer	G/S	The line height of every line in the text field	
textSize	integer	G/S	The font size of every character in the text field	

foreColor	integer	G/S	The foreground color index of every character in the text field	
backColor	integer	G/S	The background color of the text field	
textAlign	string	G/S	The alignment mode as a string: "left", "center", "right"	
buttonType	symbol	G/S	Style of the button as symbol: #pushButton, #checkBox, #radioButton	

Digital Video Cast Member Properties and Functions

Digital Video Cast Member Properties

Symbol	Type	Get/Set	Description	Notes
loop	integer	G/S	0=don't loop, 1=loop	
center	integer	G/S	0=don't center, 1=center	
crop	integer	G/S	0=scale, 1=crop	
sound	integer	G/S	0=sound disabled, 1=sound enabled	
duration	integer	G	Duration of movie in ticks (1/60th second)	
controller	integer	G/S	0=hide controller, 1=show controller	
directToStage	integer	G/S	0=composite (slower), 1=directToStage (faster)	
frameRate	integer	G/S	Framerate of movie: fixed frame rate or: 0=normal playback; -1=play every frame, normal rate; -2=play every frame, fast as possible.	
pausedAtStart	integer	G/S	0=play immediately, 1=paused at start	

video	integer	G/S	0=video disabled, 1=video enabled	
preload	integer	G/S	0=disable preload into RAM, 1=enable preload into RAM	
timeScale	integer	G	Time scale of movie	
tracks	integer	G	Track count: number of tracks in the movie	
track	symbol	G	Track type of track #1: #video, #sound, #text, #music, #timeCode	
startTime	integer	G	Start time of track #1	
stopTime	integer	G	Stop time of track #1	
digitalVideoType	symbol	G	#quickTime or #videoForWindows	

Digital Video Cast Member Functions

Name	Returns	Description
trackCount	integer	No arguments; returns number of tracks; this is the same as getting "tracks" property
trackType	symbol	argument 1: track number. Returns type of specified track. Similar to the "track" property but operates on any track.
trackStartTime	integer	argument 1: track number. Returns start time of specified track. Similar to "startTime" property but operates on any track
trackStopTime	integer	argument 1: track number. Returns stop time of specified track. Similar to "stopTime" property but operates on any track

Director Movie Cast Member Properties

Symbol	Type	Get/Set	Description	Notes

loop	integer	G/S	0=don't loop, 1=loop	
center	integer	G/S	0=don't center, 1=center	
crop	integer	G/S	0=scale, 1=crop	
sound	integer	G/S	0=sound disabled, 1=sound enabled	
scriptsEnabled	integer	G/S	0=scripts disabled, 1=scripts enabled	

Film Loop Cast Member Properties

Symbol	Type	Get/Set	Description	Notes
loop	integer	G/S	0=don't loop, 1=loop	
center	integer	G/S	0=don't center, 1=center	
crop	integer	G/S	0=scale, 1=crop	
sound	integer	G/S	0=sound disabled, 1=sound enabled	

OLE Cast Member Properties

Symbol	Type	Get/Set	Description	Notes
depth	integer	G	Pixel depth of bitmap (1,2,4,8,16,32)	
palette	integer	G/S	Palette of cast member as integer (negative numbers indicate built-in palettes, positive numbers indicate cast-based palette)	
paletteRef	castMem/symbol	G/S	Palette of cast member as <code>castMemRef</code> (cast-based palette) or symbol (built-in palette)	

maskMember	castMember	G	CastMemRef of cast member to be used as mask if mask ink applied	
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Rich Text (RTF) Cast Member Properties

Symbol	Type	Get/Set	Description	Notes
text	string	G/S	The characters of the rich text. Set only supported in authoring mode	
scrollTop	integer	G/S	Vertical scroll offset (pixels)	
pageHeight	integer	G	Vertical size of visible area (page) in scrolling field (pixels)	

Script Cast Member Properties

Symbol	Type	Get/Set	Description	Notes
scriptType	symbol	G/S	Type of script: #score, #movie, #parent	

Vector Shape Cast Member Properties

Symbol	Type	Get/Set	Description	Notes
shapeType	symbol	G/S	Shape type: #rect, #roundRect, #oval, #line	
lineSize	integer	G/S	Line thickness (pixels)	
pattern	integer	G/S	Pattern index (1-64)	
filled	integer	G/S	0=unfilled, 1=filled	

Sound Cast Member Properties

Symbol	Type	Get/Set	Description	Notes
loop	integ	G/S	0=disable looping, 1=enable looping	

	er			
sampleSize	integer	G	Number of bits per sample (typically 8 or 16)	
sampleRate	integer	G	Samples per second	
channelCount	integer	G	Number of channels (1=mono, 2=stereo)	

Styled Text Cast Member Properties and Functions

Styled Text Cast Member Properties

Symbol	Type	Get/Set	Description	Notes
text	string	G/S	The characters in the text field (null-terminated)	
textStyle	string	G/S	The styles used in the text field, comma-delimited, combo of: "bold", "italic", "underline", "outline", "shadow", "condense", "extend"	
textFont	string	G/S	The font of the entire text field	
textHeight	integer	G/S	The line height of every line in the text field	
textSize	integer	G/S	The font size of every character in the text field	
foreColor	integer	G/S	The foreground color index of every character in the text field	
backColor	integer	G/S	The background color of the text field	
textAlign	string	G/S	The alignment mode as a string: "left", "center", "right"	
boxType	symbol	G/S	Text box type: #adjust, #scroll, #fixed, #limit	
border	integer	G/S	Text border size (pixels)	

margin	integer	G/S	Text margin size (pixels)	
scrollTop	integer	G/S	Vertical scroll offset (pixels)	
dropShadow	integer	G/S	Character drop shadow size (pixels)	
boxDropShadow	integer	G/S	Box drop shadow size (pixels)	
autoTab	integer	G/S	0=autoTab disabled, 1=autoTab enabled	
wordWrap	integer	G/S	0=wordWrap disabled, 1=wordWrap enabled	
editable	integer	G/S	0=not editable, 1=editable	
pageHeight	integer	G	Vertical size of visible area (page) in scrolling field (pixels)	
lineCount	integer	G	Number of lines in text field	

Styled Text Cast Member Functions

Name	Returns	Description
lineHeight	integer	argument 1: line number. Returns height of specified line (pixels)
linePosToLocV	integer	argument 1: linePosition. Returns vertical pixel offset from line position
locVtoLinePos	integer	argument 1: locV. Returns line position from vertical pixel offset
charPosToLoc	point	argument 1: character position. Returns (x,y) point offset for given character
locToCharPos	integer	argument 1: location (point). Returns character position from given point

scrollByPage	void	argument 1: page offset. Scroll up or down n pages ($n < 0$ for down, $n > 0$ for up)
scrollByLine	void	argument 1: line offset. Scroll up or down n lines ($n < 0$ for down, $n > 0$ for up)

Xtra Cast Member Properties

The Sprite Xtra developer can define and support any other properties desired through the implementation of the GetProp() and SetProp() methods of the IMoaMmXAsset interface.

Movie Properties

Symbol	Type	Get/Set	Description	Notes
name	string	G	Filename of the movie (not full path)	
pathName	string	G	Full pathname of the movie	
createName	string	G/S	Name of user who authored the movie	May not be valid until movie is saved
modifyName	string	G/S	Name of user who last modified the movie	May not be valid until movie is saved
playing	integer	G	0 = movie is stopped in author mode, 1 = movie is playing	
defaultColorDepth	integer	G	Default color depth for new movies: 1,2,4,8,16,32.	May not be valid until movie is saved
defaultStageRect	rect	G	Default stage rectangle for new movies	May not be valid until movie is saved

tempo	integer	G/S	Current tempo setting (requested tempo, not actual)	
defaultPalette	castMem/symbol	G/S	Default palette for new movies	CastMem (for cast-based pal) or Symbol (for built-in pal) value accepted
remapPalettes	integer	G/S	0 = don't remap bitmaps on the fly, 1 = remap to cur palette	
castCount	integer	G	The number of casts (internal + external) in the movie	
stageColor	integer	G/S	The palette index of the movie stage's background color	Range depends on current pixel depth (0-255 max)
frame	integer	G/S	The frame number where the playback head currently is	Setting this does a "go to frame"
scriptExecutionStyle	integer	G/S	9 for compatibility with DMX 10 for new DMX 2004 features	
<i>Authoring-only</i>				
activeCastLib	integer	G	Movie cast index of the "active" cast	An active cast is one whose cast window was most recently active

scoreSelection	linear list	G/S	List indicating current score selection	Only valid for main movie. It's a list of lists; each sublist specifies a rectangular portion of the selection. For example, [[topSprite, bottomSprite, firstFrame, lastFrame]]
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Palette Properties

There are no palette-specific Macromedia Open Architecture properties.

Player Properties

Symbol	Type	Get/Set	Description	Notes
name	string	G	Filename of the movie (not full path)	
pathName	string	G	Full pathname of the movie	
createName	string	G/S	Name of user who authored the movie	May not be valid until movie is saved
modifyName	string	G/S	Name of user who last modified the movie	May not be valid until movie is saved
playing	integer	G	0 = movie is stopped in author mode, 1 = movie is playing	
defaultColorDepth	integer	G	Default color depth for new movies: 1,2,4,8,16,32.	May not be valid until movie is saved

defaultStageRect	rect	G	Default stage rectangle for new movies	May not be valid until movie is saved
tempo	integer	G/S	Current tempo setting (requested tempo, not actual)	
defaultPalette	castMem/symbol	G/S	Default palette for new movies	CastMem (for cast-based pal) or Symbol (for built-in pal) value accepted
remapPalettes	integer	G/S	0 = don't remap bitmaps on the fly, 1 = remap to cur palette	
castCount	integer	G	The number of casts (internal + external) in the movie	
stageColor	integer	G/S	The palette index of the movie stage's background color	Range depends on current pixel depth (0-255 max)
folderName	string	G	Full pathname to the folder of the movie	
frame	integer	G/S	The frame number where the playback head currently is	Setting this does a "go to frame"
<i>Authoring-only</i>				
activeCastLib	integer	G	Movie cast index of the "active" cast	An active cast is one whose cast window was most recently active
authorMode	integer			

scoreSelection	linear list	G/S	List indicating current score selection	Only valid for main movie. It's a list of lists; each sublist specifies a rectangular portion of the selection. For example, [[topSprite, bottomSprite, firstFrame, lastFrame]]
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Score Frame Properties

Symbol	Type	Get/Set	Description
tempo	integer	G/S	Frame tempo in FPS, 0 to clear cell completely
waitSeconds	integer	G/S	Wait in seconds, returns 0 if not waitSeconds, set to 0 to clear cell
waitClick	integer	G/S	Wait for mouse click, returns 0 if not waitClick, set to 0 to clear cell
waitSound	integer	G/S	Specify sound channel number (1-2), returns 0 if not waitSound, set to 0 to clear cell
waitDigitalVideo	integer	G/S	Specify sprite channel number (1-48), returns 0 if not waitDigitalVideo, set to 0 to clear cell
palette	integer	G/S	Access palette as integer (negative numbers indicate built-in palettes), setting defaults to instant normal palette transition, set to 0 to clear cell
paletteRef	castMem/symbol	G/S	Access palette as castMem/symbol (symbols indicate built-in palettes), setting defaults to instant normal palette transition, set to castMem(0,0) to clear cell

paletteTransitionType	symbol	G/S	"#normal, #fadeToBlack, #fadeToWhite. Setting this clears paletteOverTime to 0
paletteOverTime	integer	G/S	0=transition palette between frames, 1 = transition palette over time, setting to 1 ignores paletteSpeed
paletteFrames	integer	G/S	1-n, setting > 0 switches to paletteOverTime, set to 0 to clear (turns off overTime)
paletteSpeed	integer	G/S	1-30, setting this causes paletteOverTime to be ignored
transition	castMem	G/S	Transition castMemRef, set to castMem(0,0) to clear cell
script	castMem	G/S	Script castMemRef, set to castMem(0,0) to clear cell

Score Sound Properties

Symbol	Type	Get/Set	Description	Notes
member	castMem	G/S	Sound castMemRef, set to castMem(0,0) to clear cell	
scoreColor	integer	G/S	Score color index (0-5)	

Score Sprite Properties

Symbol	Type	Get/Set	Description	Notes
member	castMem	G/S	CastMemRef of cast member	
scoreColor	integer	G/S	Score color index (0-5)	
script	castMem	G/S	CastMemRef of cast member	
size	point	G/S		

loc	point	G/S	Returns (x,y) point offset from stage point(0,0)	
foreColor	integer	G/S	The foreground color index	
backColor	integer	G/S	The background color index	
ink	integer	G/S	The applied ink	
trails	boolean	G/S	State of trails	
moveAbleSprite	boolean	G/S	State of moveAbleSprite	
editableText	boolean	G/S	State of editableText	
blend	integer	G/S	The sprite blend	

Xtra Sprite Actor Properties

The Sprite Xtra developer can support any other properties desired through the implementation of the `GetProp()` and `SetProp()` methods of the `IMoaMmXSpriteActor` interface.

Transition Asset Properties

General Transition Properties

Symbol	Type	Get/Set	Description	Notes
transitionType	integer	G/S	Transition ID (for built-in transitions only)	
duration	integer	G/S	Transition duration (ms: 0-32000)	
changeArea	integer	G/S	0=Full-screen, 1=Change-area only	
chunkSize	integer	G/S	Chunk size (opposite of smoothness) 1-128	
<Custom Props>			Additional custom properties may be supported by Xtra-based transitions. See Xtra's documentation.	

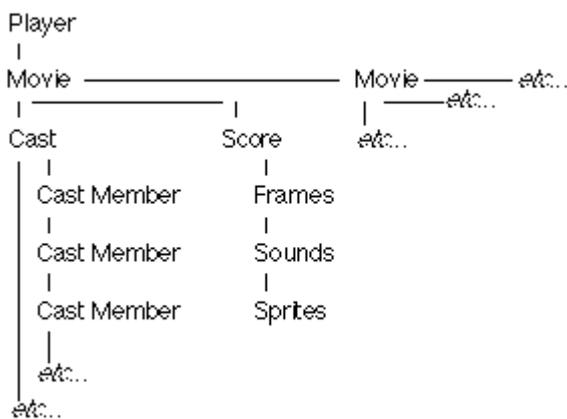
<Custom Funcs>			Custom functions may be supported by Xtra-based transitions. See Xtra's documentation.	
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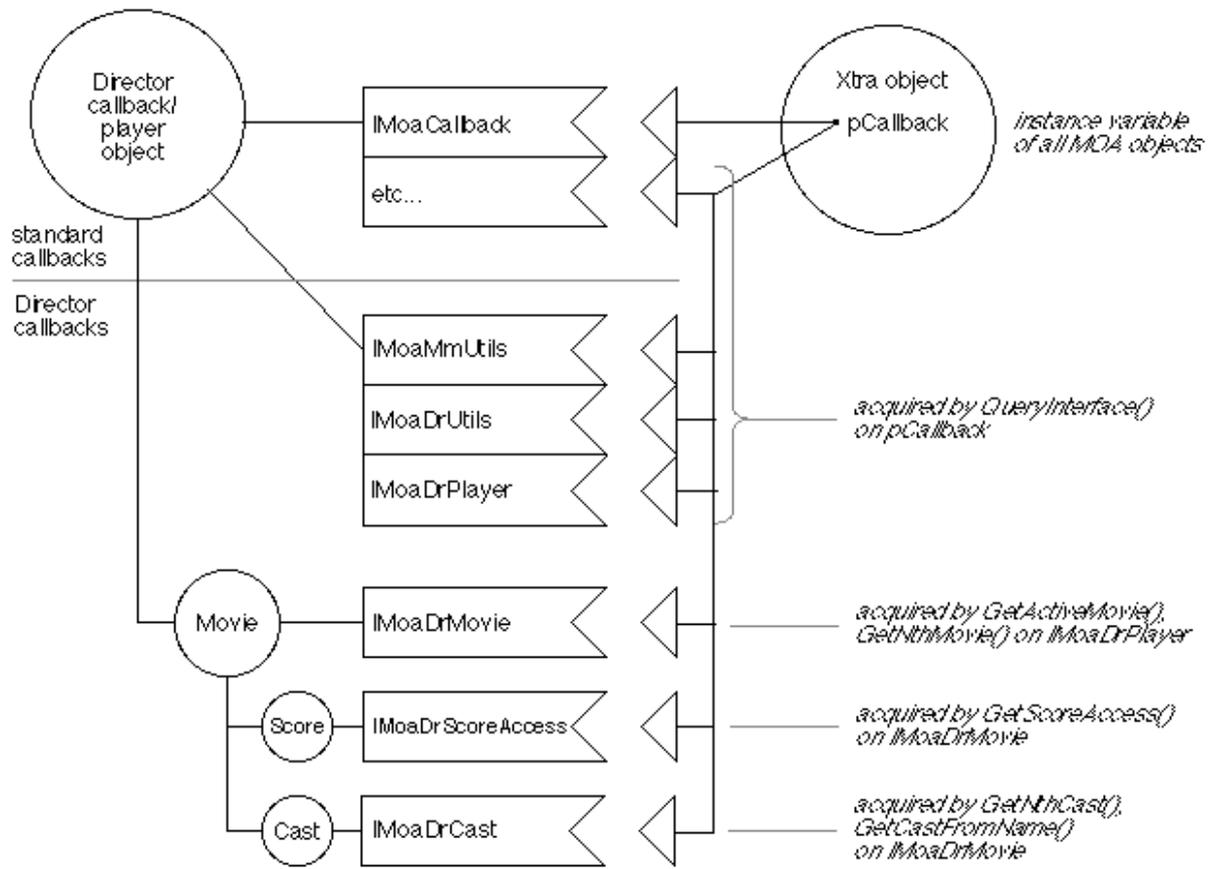
Xtra Transition Properties

The Transition Xtra developer can support any other properties desired through the implementation of the `GetProp()` and `SetProp()` methods of the `IMoaMmXAsset` interface.

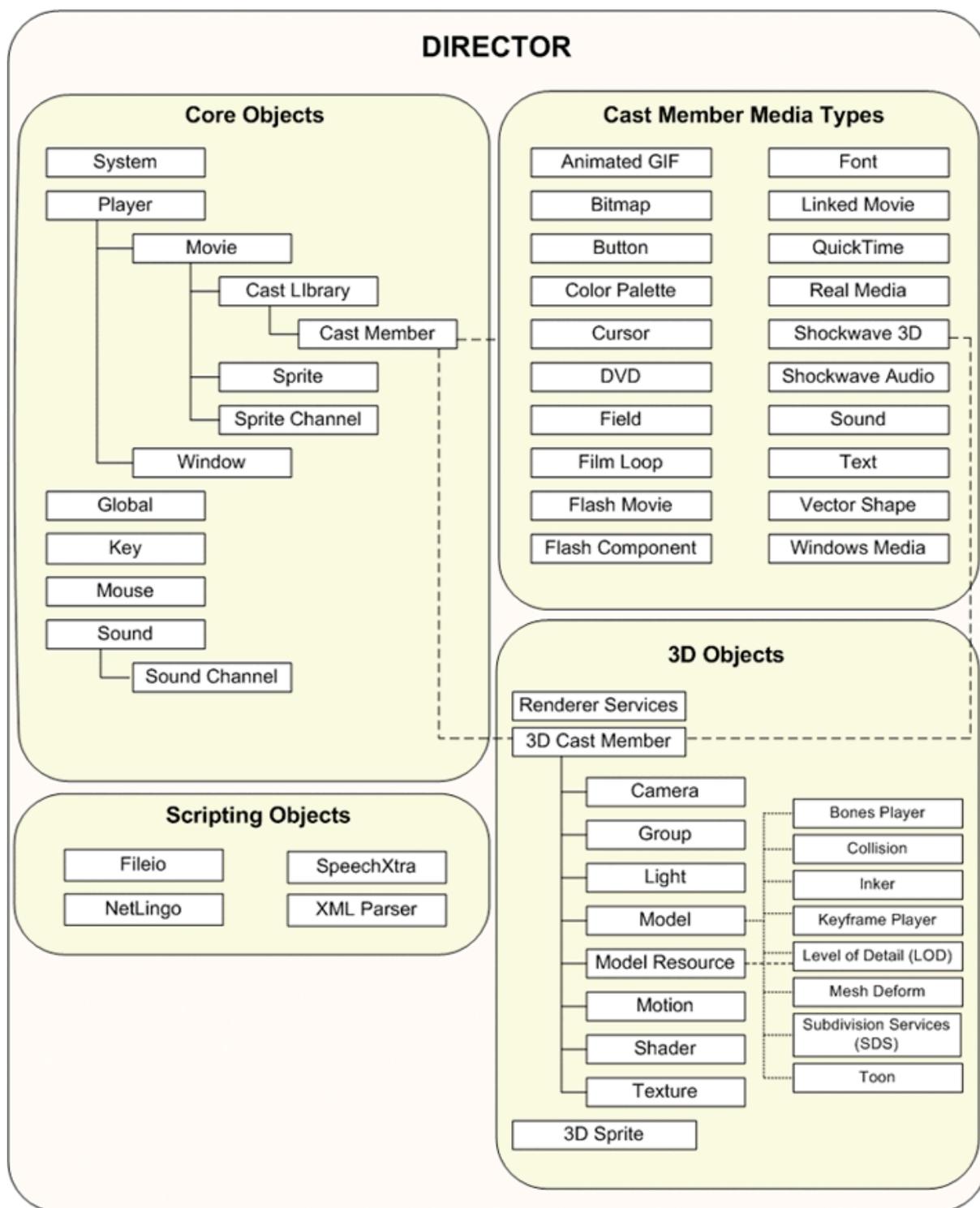
The Director Object Model for Macromedia Open Architecture

http://valentin.dasdeck.com/xtras/xtra_development/tutorials/Short%20tutorial%20on%20xtra%20programming.htm





Adobe Director Lingo Core Objects



All Macromedia Shockwave Player attributes

Attribute name	Description
accesskey	Specifies a single keyboard key as an access key. Pressing the specified access key at runtime gives focus to this component. Pressing ALT plus the specified access key at runtime gives focus to this component (or executes the component if it is a kind of button).
align	Specifies the alignment for the component: <ul style="list-style-type: none"> • left • center • right • relative
alt	Specifies alternate text for a component. The alternative text is displayed when the element cannot be rendered normally, for example, in browsers that do not support forms and in browsers set to not display images.
archive	An attribute associated with the object html tag used to render the Media Components, used to specify a space-separated list of URLs for archives containing resources relevant to the object.
bgcolor	Specifies the color of the movie rectangle before the movie itself appears. The value is expressed in the standard six hexadecimal character RGB color representation (for example, #FFFF00).
binding	An expression that binds the component's instance (usually a user interface component) to a bean property (usually in the backing file).
border	Specifies, in pixels, the size of the border for the player.
codebase	Specifies the base path used to resolve relative URIs specified by other attributes in the component.
dir	Specifies the component's direction when rendered at runtime. The values can be either:

	<ul style="list-style-type: none"> • ltr - left to right • rtl - right to left <p>If the direction is not specified, a direction appropriate to the encoding of the component is used.</p>
height	Specifies the height of the component (by number of lines, pixels or percentage of the screen).
hspace	Specifies the amount of white space in pixels to be inserted to the left and right of the component.
id	Assigns a name to a component. Should be a unique name within a page.
lang	<p>The language of the component's value(s) and text content. If omitted, the language is inherited from the containing tags (notably the view. Specified as an ISO-standard language abbreviation code. For example, "en" for English, "en-US" for American English, "fr" for French, "de" for German.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Note: This does not "translate" the text in the component, rather, it identifies the language of the component so that operations such as searching, sorting, collating and the like are done correctly.</p> </div>
contentType	Used for declaring the media MIME type when src is bound to binary data.
playerAttributes	For adding a list of additional player attributes/parameters, the list should be a comma separated list of name=value pairs.
rendered	<p>Can be set to true or false:</p> <ul style="list-style-type: none"> • false - Component will not be rendered to the browser at runtime. • true - Component will get rendered. This is the default value.
src	Media file to be played. Specifies the file to be used by the component.

standby	Specifies a message that a browser may render while loading the component's implementation and data.
swRemote	Controls all Shockmachine functionality and has separate sub-parameters. For details, refer to Shockmachine parameters in the Macromedia Director Support Center.
swStretchHAlign	Specifies horizontal alignment when swStretchStyle is set to <i>meet</i> or <i>stage</i> : <ul style="list-style-type: none"> • left • center • right
swStretchStyle	Specifies the stretch style to use for the Shockwave media: <ul style="list-style-type: none"> • none - no stretching • meet - preserve proportions • fill - stretch to fill • stage - expand stage size
swStretchVAlign	Specifies vertical alignment when swStretchStyle is set to <i>meet</i> or <i>stage</i> : <ul style="list-style-type: none"> • Top • Center • Bottom
style	Specifies CSS style information for the component (for example, style="font-size : 8pt ; color : red"). Defines the properties (such as font and color) of the selected component. This may be done manually, or by clicking the button and selecting the desired properties from within the window.
styleClass	Space-separated list of CSS style classes to be applied when this element is rendered. This value must be passed through as the class attribute on generated markup. Defines the classes (such as style sheets) of the selected component. This may be done manually, or by clicking the button and selecting the desired Classes from within the window.
tabindex	Specifies the position of the component in the tabbing order in the page. This value must be a number between 0 and

	32767.
title	Specifies the title text, shown in browser as a tooltip at runtime. Used by a browser as the alternative text of a component if the alternative text is not specified.
vspace	Specifies the amount of white space, in pixels, to be inserted to the top and bottom of the component.
width	Specifies the initial width of the component. The width is given in pixels except in the case of a text input component where its value refers to the number of characters.

Symbols

Director 4 for Windows has nearly all its functionality in one library (DIR4WIN.DLL) and has nearly all of its symbols but Hex-Rays cannot decompile it because it is 16-bit.

Director 5 for Windows is the first 32-bit version, and has all of its code in the main DIRECTOR.EXE file, but has no symbols - except on the Mac, which has a small handful but cannot be decompiled by Hex-Rays either because it is for PowerPC. Director 5.0 is easier to inspect because it makes consistent use of Win32 API functions.

Director 7 splits its codebase into separate DLLs, the Director API (DIRAPI.DLL) which is what it sounds like, and the Idealized Machine Layer (IML32.DLL,) which effectively is a set of utility functions to allow for easier cross-platform development on Windows and Mac that the Director API uses. The Mac version has about one third of the symbols and can be decompiled but is difficult to inspect due to the Idealized Machine Layer, and the Windows version exports by ordinal. This is also true of all later Director versions up to Director 12.

Director API 10.1.1r16

http://valentin.dasdeck.com/lingo/symbols_dirapi_10.1.1r16.txt

Idealized Machine Layer

http://valentin.dasdeck.com/xtras/iml/iml_exports.txt