# References

<https://github.com/videolan/libvlcsharp/blob/3.x/docs/libvlc_documentation.md>

[Drag and Drop](https://learn.microsoft.com/en-us/dotnet/desktop/wpf/advanced/drag-and-drop-overview?view=netframeworkdesktop-4.8)

[libvlc source](https://code.videolan.org/videolan/libvlc-nuget)

[libvlc documentation](https://videolan.videolan.me/vlc/group__libvlc.html)

[libvlc forum](https://forum.videolan.org/viewforum.php?f=32&sid=aaef6d225cb967acf6d2356703c3a4b5)

[libvlcSharp](https://code.videolan.org/videolan/LibVLCSharp)

[LibVlcSharp thread switching](https://code.videolan.org/videolan/LibVLCSharp/-/blob/3.x/docs/best_practices.md#do-not-call-libvlc-from-a-libvlc-event-without-switching-thread-first)

VLC path: C:\Program Files\VLC

# Specification

#### Playlists

.m3u (for playing in VLC)

.bat (for calling VLC)

.vlclp (for playing in VLC List Player)

#### Options

Per clip:

* start time (#EXTVLCOPT:start-time=85)
* stop time (#EXTVLCOPT:stop-time=89)
* repeat count (--input-repeat=3) (ignored by VLC in .m3u)
* playback speed (--rate=1.5) (ignored by VLC in .m3u)
* aspect ratio
* crop
* mute (--no-audio)

Whole playlist:

* repeat whole playlist
* file paths absolute or relative (to what folder?)
* mute

## Implementation Notes

### Time after NextFrame()

cylons fps=25 (ie, 0.040 sec/frame).

Vid at start. Time display 0.

After pressing ‘Frame’: Vid still at start. Time display still 0. Log:

FrameBtn\_Click(): state=Paused time=0 calling \_mediaPlayer.NextFrame()

FrameBtn\_Click(): after NextFrame(): state=Paused time=0

DisplayTime(0): setting Scrubr.Value

After pressing ‘Frame’: Vid moves forward. Time display 0.030. Log:

FrameBtn\_Click(): state=Paused time=30 calling \_mediaPlayer.NextFrame()

FrameBtn\_Click(): after NextFrame(): state=Paused time=30

DisplayTime(30): setting Scrubr.Value

OnScrubrValueChanged(): isPlaying=False ignore=True value=30 media.Time=30

After pressing ‘Frame’: Vid moves forward. Time display 0.070. Log:

FrameBtn\_Click(): state=Paused time=70 calling \_mediaPlayer.NextFrame()

FrameBtn\_Click(): after NextFrame(): state=Paused time=70

DisplayTime(70): setting Scrubr.Value

OnScrubrValueChanged(): isPlaying=False ignore=True value=70 media.Time=70

After pressing ‘Frame’: Vid moves forward. Time display 0.110. Log:

FrameBtn\_Click(): state=Paused time=110 calling \_mediaPlayer.NextFrame()

FrameBtn\_Click(): after NextFrame(): state=Paused time=110

DisplayTime(110): setting Scrubr.Value

OnScrubrValueChanged(): isPlaying=False ignore=True value=110 media.Time=110

To get frame #1 (second frame) to display using scrubber, must move scrubber (and time display) to 0.041.

Conclusions:

* Duration of frame #0 seems wrong (‘Frame’ goes forward by 0.03 instead of 0.04).
* No events occur (including TimeChanged) after NextFrame().
* Time reported immediately after NextFrame() is not the time of the next frame, but the time prior to calling NextFrame().
* \_mediaPlayer.Time actually advances asynchronously AFTER a call to NextFrame().

### Scrubbing Stoppage

See if it continues to work if only scrubbing slowly. IT SEEMS TO.

Disable OnTimeChanged (if it fires at all). IT DOESN’T FIRE.

See if OnTimeChanged calls get backed up when scrubbing too fast. IT DOESN’T FIRE.

Does .Time getter change as soon as its setter has been called? YES. :(

Don’t change .Time if previous .Time call hasn’t been reflected in OnTimeChanged. CAN’T BE DONE SINCE .Time is updated immediately.

Don’t change .Time if previous .Time set isn’t reported in current .Time. CAN’T BE DONE SINCE .Time is updated immediately.

Rate-limit calls to .Time when scrubbing. Could use a queue or simply drop calls. Do a final .Time on Thumb.DragCompleted.

Ask in Discord. OnTimeChanged doesn’t fire when scrubbing.

Someone else’s report: <https://code.videolan.org/videolan/LibVLCSharp/-/issues/576>

### Scrubber Values

Scrubr

* .Width = element width (px); will be wider than ScrubScroll if zoomed
* .Maximum = clip length (ms)
* .Value = thumb position = clip .Time position (ms)

ScrubScroll

* .ViewportWidth = width of visible content (px)
* .ExtentWidth = width of contained content (Scrubr.Width) (px)
* .HorizontalOffset = LHS of visible content (Scrubr) (px)

# Documentation

Will crash.

Creates .m3u playlists that are suitable for VPP. Some of the new directives will work in standard VLC, but the latter doesn’t implement many playlist options.

Can’t save directly to a playlist that wasn’t created by VPM (to avoid accidentally corrupting the file). If you really want to do this, use Save As.

# Scratch Area