



In This Month's Magazine

The President's Report

Oculus creates a new, open source unit of time to measure frame rates

How to Choose the Right Camera for You

**March 2018**

Mon	Tue	Wed	Thu	Fri	Sat	Sun
			1	2	3	4
5	6	7				
12	13	14				
19	20	21				25

**7th March 7.30pm  
Wednesday Club Meeting  
Novice Competition  
Plus 15 seconds Screening**

**Tropfest 7 Second  
Deadline**

**13th March 7.30pm  
Tuesday Committee Meeting  
Robin Godson King**

**April 2018**

Mon	Tue	Wed	Thu	Fri	Sat	Sun
						1
2	3	4	5			
9	10	11	12			15
16	17	18				22
23	24	25				29
30						

**4th April 7.30pm  
Wednesday Club Meeting  
Open Competition**

**10th April 7.30pm  
Tuesday Committee Meeting  
Ian Huish**

2018 COMPETITIONS & FUNCTIONS	
March 2018	Novice Competition up to 10min. Plus 15sec. Screening (Any Topic)
April 2018	Open Competition (Any Topic) up to 15min.

# From the President's Desk



The February One minute Competition as expected turned out to be a real blast with a record breaking 24 entries! And what a diverse group of films they were.

From screwball comedies, interesting travelogues, deep and meaningful, a drone film with eye popping scenery, New Year's Eve fireworks, brilliant animation, zoo footage, a Las Vegas story, and lastly a film written by a young student in his first year at school! People attacked the making of these magic minute films with great verve and style, with their efforts coming to fruition on the big screen in front of the captivated audience - our N.V.M. colleagues. Man, it was really something! Taking out 1st was Ian's outstanding animation Cleaner Bot.

During our latest committee meeting it was decided that we would try to celebrate our club's 30th year in style. The committee suggested that we could meet up for a meal together on either August the 11th or 18th at possibly the Eastern Tiger at Cardiff for a lunch or dinner? We'll discuss this further during the next meeting on the 7th of March.

And speaking of next meeting, the March comp is the Novice competition plus we'll be screening all of our new 15 seconds mini masterpieces. Up until the publication of this magazine we haven't received many 15 second so Amanda has volunteered to be at the Jesmond Neighbourhood Centre from 7pm to collect and upload into the club's laptop any last moment 15 seconds. I'm sure there'll be plenty of gems on show. Finally, the committee asked if I would

reiterate our club's policy on using copyright music. You may not be aware, but our competition rules states that copyrighted music should not be used unless of course you have gone to the huge expense of obtaining the rights.

Music must be royalty-free, original composition or used under a licence agreement. This rule was introduced for legal reasons and although our limited exposure means it is highly unlikely anything would come of using copyright material, the club has maintained a view that it is better to use legally available music and images in member productions screened at the club or via any of its internet content portals. We have in the past continued to overlook some "fair use" of such material where the use of a short piece is needed for parody or explanation, plus also in association with the production of your 15 second films. If you are having trouble finding appropriate music for your films, there are many musicians, bands, songwriters and composers on the internet offering their music free of charge and available for use, many requesting a simple attribution in your films credits. Search for "Creative Commons Music".

*Phillip Reynolds.*

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David Elliott talking about the Film of the Month, he introduces films out of focus



Stuart Whitter accepting 3rd in our Montage Competition with 'Snapshots of Paris'



Phil Reynolds accepting 2nd in our Montage Competition with 'Total Radio Silence'



Mansel Williams talking about finding that special footage all film makers look for

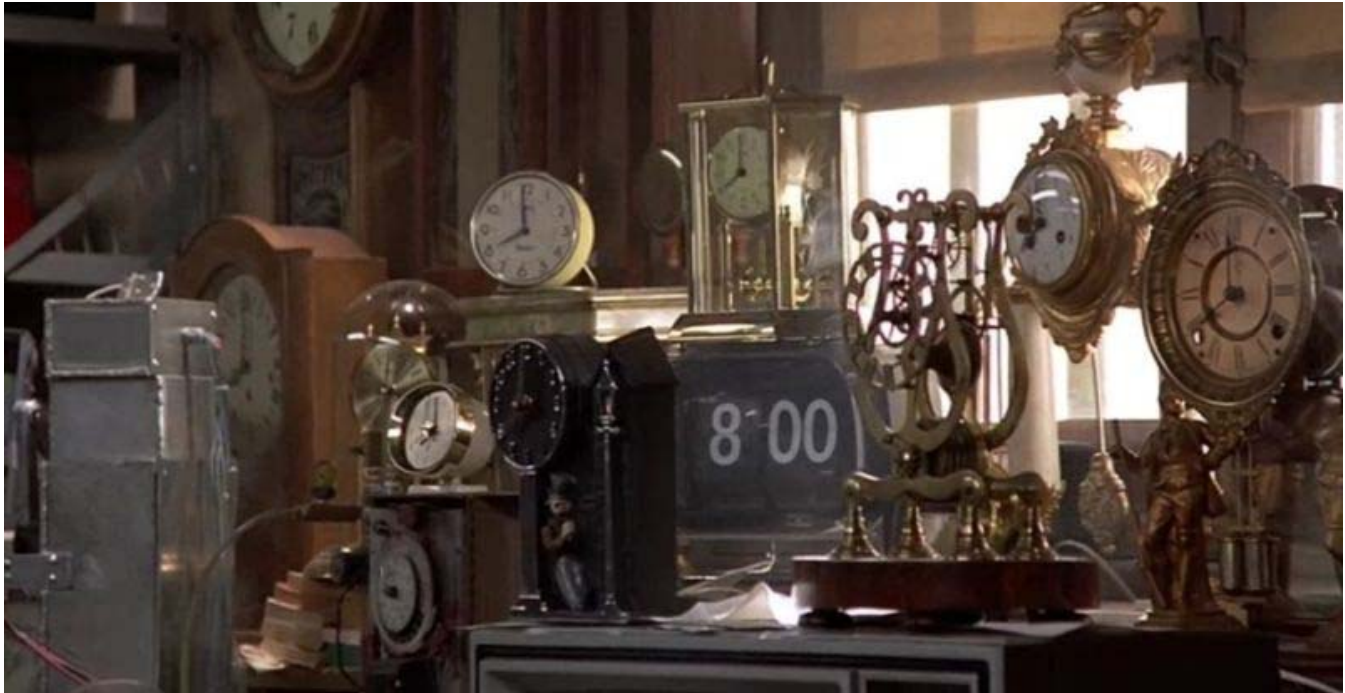


Ian Huish accepting 1st in our Montage Competition with 'Go Wrong'

## *I'll be done in just a flick —* **Oculus creates a new, open source unit of time to measure frame rates**

1 flick = 1/705,600,000 of a second

[Kyle Orland](#) - 1/25/2018, 3:49 AM



You're gonna need a more precise clock to measure those 90 fps frames...

Of all the things we expected to come out of the rise of Oculus and the still-burgeoning era of consumer virtual reality, a new fundamental unit of time was not one of them. But that's just what Oculus and Facebook have rolled out this week in the form of the flick, a new definition that subdivides a single second into precisely 705,600,000 parts.

If you use common time units like the millisecond or nanosecond to measure how long a single frame of video appears on screen, you're often left with a fractional remainder rather than a clean, whole integer. This can be a problem in programming and visual effects, where rounding and/or floating point representations can lead to slight imprecision or desynchronization over time. Delivering video frames with

perfect timing is also pretty important to delivering a comfortable VR experience.

Thus, the idea of a new time unit was hatched in an October 2016 Facebook post by Oculus Story Studio Architect Christopher Horvath, and it was fleshed out with partners in the following months. The flick (short for frame-tick) was constructed so that everything from 24 fps films to 90 fps VR games to 16,000 fps ultra-slow-

motion video and more could measure a single frame in a whole number of flicks (a 90 fps frame takes up 7,840,000 flicks, for instance). The flick also lines up with the most common audio sampling rates in the same way, allowing for precise demarcations in timing.

With that definition set, Oculus has created an open source C++ library allowing for easy integration with standard library timing functions. The same basic idea can be implemented in other programming languages much the same way.

That's all well and good, but we're actually more looking forward to integrating this exciting new time unit into our everyday speech. Back in a flick!

<https://arstechnica.com/gaming/2018/01/oculus-creates-a-new-open-source-unit-of-time-to-measure-frame-rates/>

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# How to Choose the Right Camera for You

By Steven Gladstone |

Since the Canon 5D MarkII (since supplanted by the Mark III and Mark IV) started shooting video and consumer camcorders started capturing 4K, the lines of differentiation between cameras, and for what purpose, have been blurred. What follows is my take on how to navigate your choices and make the selection which will be the most appropriate for you and the kind of media you intend to capture.

## The Challenge: Who is the King of the Mountain?

Most Mirrorless and DSLR cameras shoot video and many can capture UHD 4K or 4K DCI. these days, so if you are looking for a one camera solution that shoots still photos and video, these tend to be a good choice. DSLR cameras are designed for optical viewing of the image through your lens, and thus incorporate a mirror that must be “locked up” out of the way to shoot video. This requires a live-view feature, and an LCD screen to see what you are shooting. Mirrorless cameras, on the other hand, have no mirror to lock up and use live view by default. The Sony A7S and A7R series and the Panasonic Lumix series are both Mirrorless cameras that offer excellent options. The A7S/A7R cameras feature full-frame sensors; the A7S opts for lower resolution and larger pixels than the A7R series. Both cameras feature Sony’s E-mount, so they can accept almost any lens out there with the corresponding adapters. The Panasonic Lumix series offers a wide variety of cameras, but the GH4 and now the GH5 feature weatherized magnesium bodies. In addition, the GH5 enables internal 4:2:2 10-bit recording. The MFT mount can accept many lenses with different mounts and, with the proper adapters, you can use a full-frame lens and keep the full-frame depth-of-field characteristics, while effectively doubling the speed of the lens.



Panasonic Lumix DC-GH5 Mirrorless Micro Four Thirds Digital Camera with 12-60mm Lens

Although there are a few consumer camcorders on the market that also take stills, the stills tend to be limited to 2MP, or sometimes are up-scaled to 10MP, so you won’t get the 24MP resolution that still cameras seem to be aiming for currently. Of course, you could shoot video and pull frames in post, but remember—video is generally shot using a relatively slow shutter speed (about 1/50 of a second) and this provides motion blur to the image, which is good for making motion look smooth, but not so good for sharp photos.



Canon VIXIA HF G40 Full HD Camcorder

Don’t forget to check out the capabilities of the professional and Digital Cinema video cameras. These cameras tend to feature more choices for codecs and compression, the ability to shoot video using Log or raw formats and employ professional XLR inputs for audio. Panasonic, Sony, Canon, JVC, ARRI, Blackmagic Design, RED, and AJA all offer



Blackmagic Design URSA Mini Pro 4.6K Digital Cinema Camera

## Still Cameras

Still images are usually viewed for significant amounts of time, so artefacts and defects in the image can become quickly noticeable and distracting. Therefore, stills resolution is usually high, with most current still cameras packing 24MP sensors—far greater than even 4K UHD origination. Many still cameras offer the option to shoot video, as well, either HD or 4K. With their large sensors and interchangeable lenses, this is seen by many as an attractive option, but it is no slam-dunk.



## Video Cameras

Whether standard definition (SD), or High Definition (HD), or now 4K—video cameras have always made certain compromises capturing the image when compared to a still-camera frame. This often had to do with the fact that each “frame” of video is only seen for 1/30 or 1/24 of a second (in general), so artefacts and defects are gone almost before you notice them. This fleeting image is one of the reasons motion pictures and, later, digital images could get away with using smaller sensors and lower resolutions than full-frame still-picture cameras. With HD resolution, you are capturing just above 2MP of resolution, and 4K UHD is a little bit bigger than 8MP per frame. Additionally, with electronic/digital capture of frames with movement within them, there is a wide variety of techniques available that compress the images for storage and can trick the eye into seeing a sharp moving image that, when frozen as a still, doesn't quite look as sharp as you might expect.

## Data Rates

Just like your cell-phone data plan, you don't get something for nothing and even though capturing high-resolution imaging isn't generally a problem these days, when you start recording minutes of video at 30 fps (1,800 frames per minute) this can take quite the toll on a camera. Even shooting at lower resolutions of HD and 4K when compared to still-photo resolution, there are many issues that can pop up, such as overheating and your camera shutting down, or dropped frames if your recording media is not up to snuff. Annoying enough when you are shooting your kids' grade-school plays—which they'll be happy won't be saved and shown at their weddings—this is absolutely devastating to a professional who must get the shot.

## Compression

There is the matter of how you reduce a 24MP sensor to 2MP for HD, or less than 9MP for 4K. Are the camera binning pixels, or line skipping, or doing some kind of down-scaling in-camera? All these can lead to unwanted artefacts. Of course, you could crop the sensor, but then you are effectively changing the field of view of the lens you are using. Most video cameras, on the other hand, have smaller sensors, and are purpose-built to handle the data rates and heat that is generated when capturing video.



## Features

Stills cameras seem to have a few more refinements than a consumer camcorder, especially when considering auto-focus capabilities. To match the interchangeable-lens capabilities of a still camera, video cameras generally cost twice as much.

### Form Factor

All this may seem to point to a stills camera as a no brainer, but there is a reason video cameras have developed along the lines that they have. Looking through a viewfinder and balancing a camera on your shoulder for minutes at a time is much more effective than holding the camera in front of you, trying to keep it stable. Even consumer camcorders have a shape more conducive to the classic handheld style than a still-camera body. This does make a difference. Yes, you can get/build a shooting rig for your still camera, adding loupes and external EVFs, etc., but now the size and cost of your still camera starts to meet or even possibly exceed your purpose-built video camcorder.



I hope I've given you something to think about as you consider which camera is the right one for you. I've started gravitating toward the mirrorless side of things primarily for the small form factor; if I were shooting longer projects, my A-choice would be a Pro video or Digital Cinema Camera. Just remember—the best camera for you is the one that puts the fewest limitations on your creativity, and the best camera is always the one you have in your hand at that moment. What would be your choice?

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<b>CLUB MEETINGS</b>
<p><b>WHEN:</b> The first Wednesday of each month at 7.30pm.</p> <p><b>WHERE:</b> Jesmond Neighbourhood Centre      44 Mordue Parade Jesmond</p>
<p><b>CORRESPONDENCE TO:</b></p> <p>The Secretary,          NEWCASTLE VIDEO MOVIE          MAKERS Inc          PO Box 67 ADAMSTOWN NSW 2289</p>
<p><b>Committee meetings:</b> These are held on the Tuesday following the club meeting each month at a committee member's home in rotation. All members are welcome to attend, however a courtesy call to the committee member concerned would be appreciated.</p>

Contact us Email: [contact@nvm.org.au](mailto:contact@nvm.org.au)

Location of  
 NVM Club room  
 44 Mordue Pd  
 Jesmond  
 Neighbourhood  
 Centre

