



## In this issue:

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Snippets from  
CES 2018

## Editor's Note.

CES 2018 has provided us all with much food for thought !

My topics of the day are:

“where will Robots+AI lead the human race? “

“Do Isaac Asimov’s 3 laws of robotics still apply and are they enough?”

Discuss.

*My thanks to forum members :*

*The Shadowman for his ongoing Newbie Room series*

*Ynotfish for his Green Screen article and video*

Lenovo has launched a point and shoot camera to live-stream 180deg VR video.

Apparently live streaming of 360deg video is disconcerting for cameramen and viewers!

The Mirage has 2 x 13 megapixel fisheye cameras to capture stereoscopic images. It shoots 4K@30fps streamable to YouTube over Wi-Fi.

Find out more [here](#)



CineAlta VENICE is a full-frame 6K camera equipped with a 36x24mm sensor and a maximum resolution of 6048x4032.

*“It is our next-generation camera system, a ground-up development initiative encompassing a completely new image sensor. We carefully considered key aspects such as form factor, ergonomics, build quality, ease of use, a refined picture and painterly look—with a simple, established workflow. We worked in close collaboration with film industry professionals. We also considered the longer-term strategy by designing a user interchangeable sensor that is as quick and simple to swap as removing four screws, and can accommodate different shooting scenarios as the need arises.” —Peter Crithary, marketing manager, Sony Electronics.*

Someone said it costs \$37,000—maybe next Christmas??

Find out more [here](#)





# PDNews

Monthly news from the PD world

## Asus Bezel Free Kit

3 monitors, 2 optical prisms and a bit of neat design and .....

A 3 monitor, 72" wide seamless monitor experience!

Find out more [here](#)



Scosche's BoomBottle MM Bluetooth speaker actually has a bottle opener!

So useful for cracking open a cold beer whilst listening to your favourite sounds.

They can also be linked to give a stereo pair—presumably also opening 2 beers simultaneously!

Find out more [here](#).



## Panasonic Video-Oriented GH5S Mirrorless Camera

Recording at 10-bit 4:2:2 when working at resolutions up to DCI 4K and 30p. It can reach 60p in 4K at 8-bit internally or 10-bit via the camera's full-size HDMI port. Internal recording is no slouch, however, because an ALL-Intra 400 Mbps mode is available for highly detailed footage.

It is splash-, dust-, and freezeproof, with numerous seals throughout the magnesium-alloy frame and lightweight body.

Find out more [here](#)



## Empathy

Honda's 3E-A18 is an empathetic robotic device designed to explore the emotional connection between machines and humans. The 3E-A18 has a face that can show emotions and can recognize and respond to the emotions of a person interacting with it. Sitting atop an omnidirectional driving wheel, the A18 has a rounded, egg-like shape with a soft exterior skin that "invites people to touch or hug the robot," in Honda's words.

Find out more [here](#).



# Spectre and Meltdown

Well, who would have thought it? A simultaneous (nearly) discovery by at least 4 independent research groups of a 20 year old major vulnerability affecting all chip types (more or less).

## Variants

Apparently there are 3 vulnerabilities :

- Spectre v.1 - a “Bounds-Check Bypass”
  - ◇ The CPU is tricked into speculatively loading data from outside the bounds of an array which is bounds-checked, ie. at a virtual address chosen by the attacker.
- Spectre v.2 - a “Branch Target Injection”
  - ◇ The CPU is tricked into mispredicting an indirect branch (commonly used to implement 'virtual' functions in C++, or jump tables in the kernel) to speculatively execute program code chosen by the attacker.
- Meltdown - a “Rogue Data Cache Load”
  - ◇ The CPU is tricked into speculatively loading data which is in the L1 D-cache, but which is marked as unreadable in the page tables. Such data is typically accessible to privileged code running in the same process (eg. upon executing a syscall), and is left mapped but unreadable as a performance optimisation.

## Performance Impact

- Spectre type mitigation measures may have an effect on performance, held by many researchers to be small
- Meltdown mitigation may have noticeable performance degradation depending on the workload and type.

## Vulnerable CPUs

Spectre v.1

- Potentially anything with branch-prediction and a sufficiently deep pipeline. This is **not** an x86-specific exploit. The newer the CPU, the more likely it is vulnerable. In particular on the AMD side, Piledriver, Excavator and Ryzen are confirmed to be vulnerable - but this is nothing special. **Potentially even K6 and Pentium Pro are vulnerable**, but early Atoms and the Pentium-MMX are not.

Spectre v.2

- This attack requires poisoning the CPU's BTB. This is easy on at least Intel Haswell CPUs (and probably some other Intel CPUs), because BTB entries are aliased in a very predictable way. Some recent ARM Cortex-A series CPU cores are reportedly vulnerable too, for the same reason. **It is much more difficult on all AMD CPUs**, because BTB entries are not aliased

Meltdown

- This attack requires that the CPU fails to promptly check security flags while performing L1 D-cache loads for a speculatively-executed instruction. Various Intel CPUs (**everything from Nehalem and Silvermont onwards**, including Coffee Lake and Xeon Phi) are vulnerable. **AMD CPUs are not vulnerable**.

## Further info (amongst very many!):

- ⇒ [Reddit](#)
- ⇒ [welivesecurity](#)



## Some possibilities for Removing extra Green Screen space

At some time or other, we may all try a bit of chromakeying and green screening. However, unless we use professional flat lighting and a single colour green screen we may run into issues. We might also just not have the space or facility to do the job we need.

So, what happens if we shoot some green screen footage, but the green screen doesn't fill the 16:9 screen ?



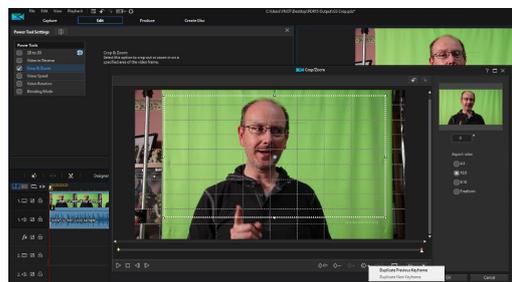
Whoops! Time for some post –production techniques.

**Some possibilities for correcting this include cropping & masking.**

In Tools > Power Tools > **Crop & Zoom** - Crop the video (which may remove part of the subject)

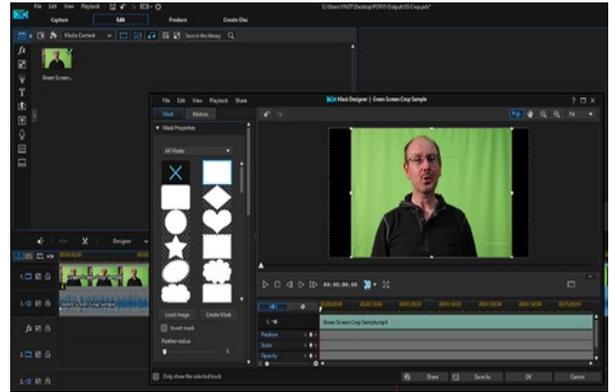


After cropping, insert video background & apply chroma-key





In **Mask Designer**, a basic mask can be applied to “cut out” the unwanted area



A custom colour board can be inserted in a lower numbered track to “fill” the masked area



A custom colour board (as above) can be inserted behind the mask video to fill the masked area



Chroma-key can be applied to the green screen to soften colour differences, then the background video inserted and chroma-key applied



A custom mask with blurred edges can be applied



A custom colour board (as above) can be inserted behind the mask video to fill the masked area



Chroma-key can be applied to the green screen to soften colour differences, then the background video inserted and chroma-key applied



The video showing the techniques outlined applied in practise can be viewed [here](https://www.youtube.com/watch?v=2uP8uXrTISo):

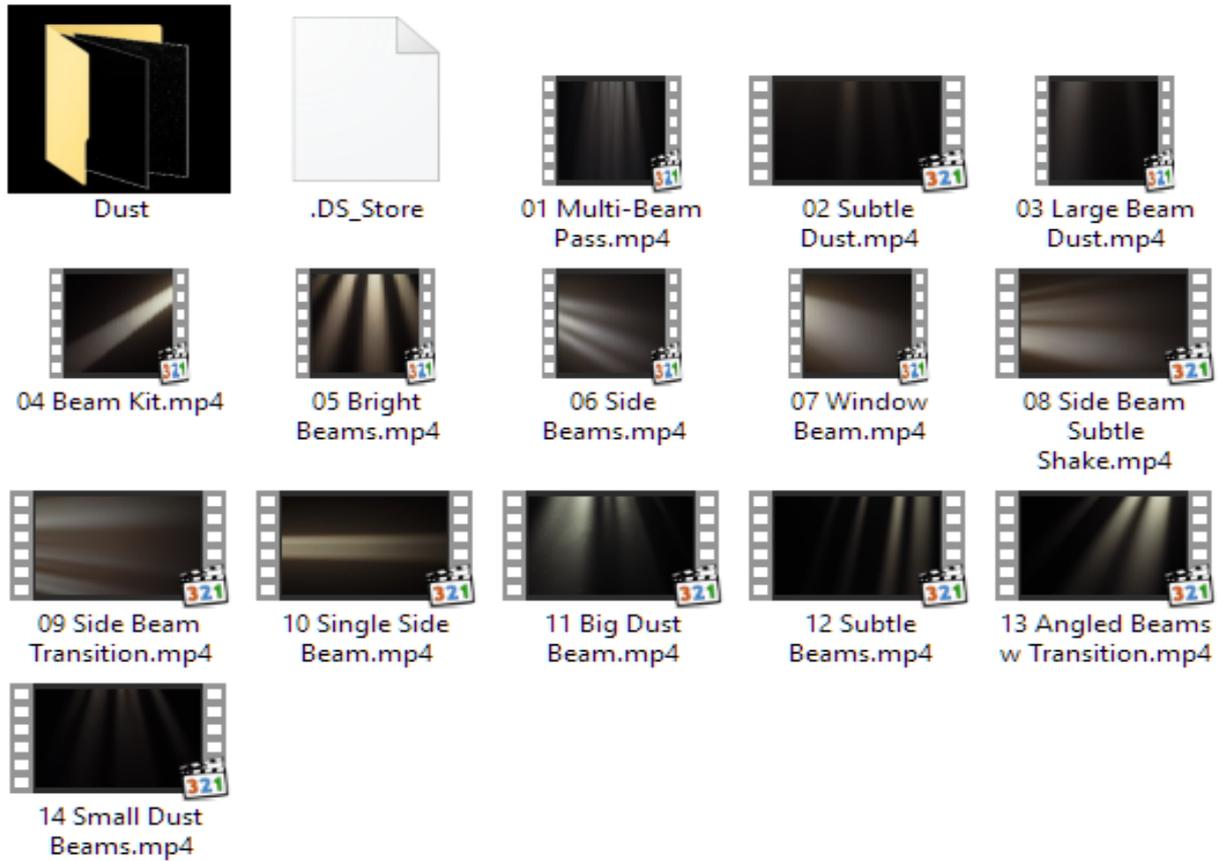
<https://www.youtube.com/watch?v=2uP8uXrTISo>



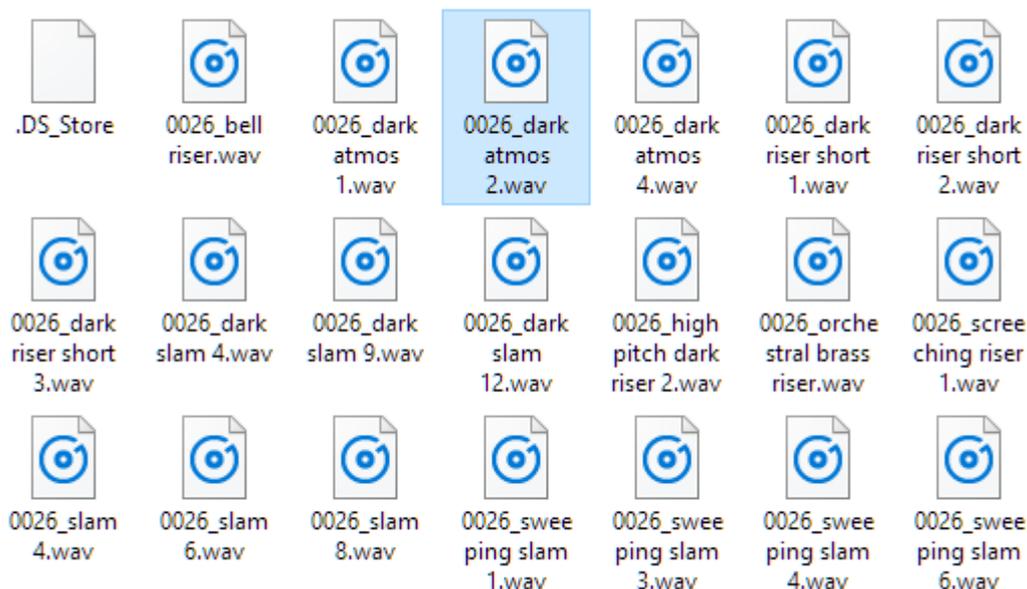
## Free Effects

A nice selection of 4K light beam and dust overlay effects are available [here](#).

I've tested most of them and they seem to work with PDR16



You can get a heap of free SFX [here](#)



# The Newbie Room

*The place to come if you are new to PowerDirector, video making and editing.*

*Visit here to pick up some new and useful tips.*

## Slideshows At A Glance with PowerDirector 16

Straightforward slideshows are fine, but why not make them much more appealing to the viewer by adding a few extras.

In the PowerDirector 16 Slideshow Creator there are no less than thirteen basic slideshow styles to choose from.

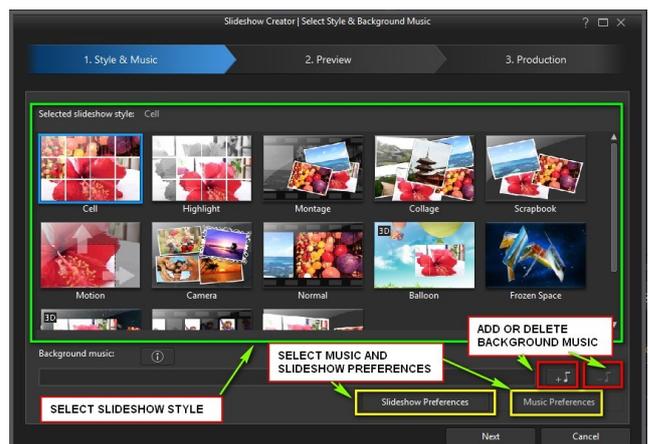
The Slideshows have generic preferences for music and photos.

### Slideshow Opening Screen

Style & Music

#### Music

When adding background music the following options are available: Audio can be trimmed as required and can be faded in and out. Volume can be set as required.



#### Photos

Photos can be arranged in **timeline order** or by **date & time taken**. It is also possible to select an option to detect faces.

Magic Slideshow Technology synchronises the beat of the music to the photos in the slideshow. Photos can be fitted to the music or, if preferred, the music to the photos.

Once the style of slideshow has been selected and the above options chosen, select NEXT to move to the Preview screen.



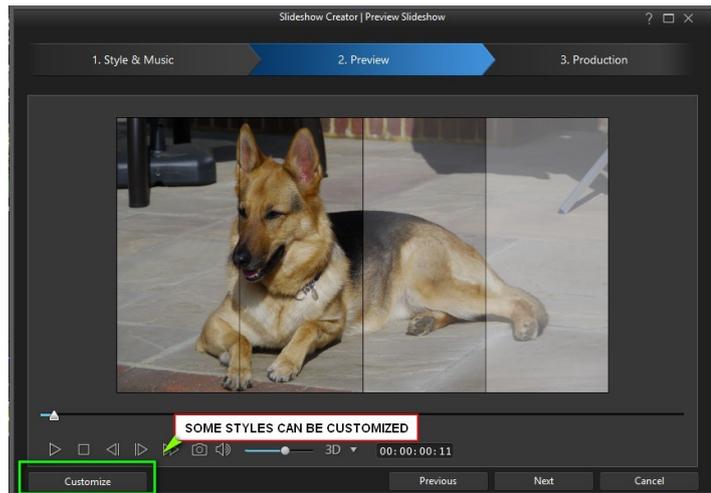
## Screen Two - Preview Screen

### Slideshow Styles

As previously written, there are thirteen basic styles to choose from when designing a slideshow. The majority of the styles can be customised in some way.

The styles provided by PowerDirector 16 are listed in the opening screen with the following titles:

Cell, Highlight, Montage, Collage, Scrapbook, Motion, Camera, Normal, Balloon, Frozen Space, Outer Space, Timelapse and finally 3D.



Below is a brief description of each slideshow style and how it can be customised.

### Cell

This slideshow is rather like a video wall with various amounts of pictures flashing on the screen.

It can be customised by setting the **focus area** of each photo; a **Remix** button is also available to change the original picture setting to a modified version.



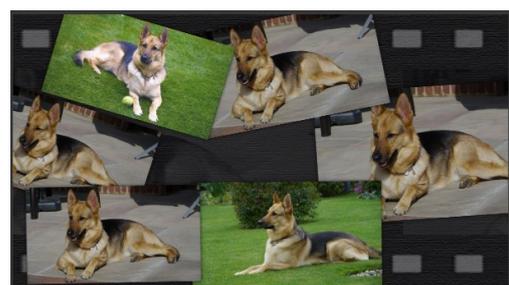
### Highlight

Photos are flashed as overlays to a background monochrome picture. Basic cropping is available to the foreground and background material.



### Montage

A basic display of photos at various angles with monochrome 16mm film clip background.



## **Collage**

A slideshow that displays bordered pictures at various angles. A monochrome background image can be changed.



## **Scrapbook**

A similar slideshow to Collage with bordered photos at various angles and sizes. A monochrome background can be changed.



## **Motion**

PD16's most customisable slideshow. Interesting fades with zooming in and out. Motion is customisable with keyframes and zoom settings.



## **Camera**

A display of photos with an old film theme. The focus area of the picture can be set, and a remix button will modify the original picture settings.



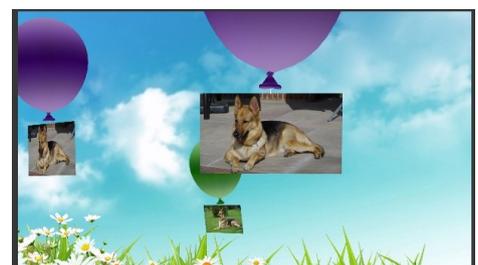
## **Normal**

A straightforward slideshow with various transitions between the photos.



## **Balloon**

Pictures float by on a balloon. The pictures can be cropped.



### **Frozen Space**

Pictures float in a background of space. The pictures can be cropped and the background changed.



### **Outer Space**

Pictures float from right to left across a space background with asteroids. The background can be changed and cropping is available.



### **Time-Lapse**

A slideshow with a time-lapse effect. The frame rate speed can be selected to set the duration of each image.



### **3D**

Pictures float by in ornate gold picture frames. Cropping is available and the background can be changed.



### **So Many To Choose From!**

The newbie editor could be forgiven for thinking that with thirteen styles to choose from there would be no room for boredom on the part of the audience.

Think again though, to place maybe two hundred or more photos on a timeline and expect viewers to endure those two hundred photos floating by on a balloon would be criminal.

With the above in mind let's have a look and see how we can make the show more interesting:



Slideshows, just like any video, will look more professional if a short intro clip is inserted at the beginning.

Make the video clip look good so it can be used on all your slideshow projects. You might want to give yourself a "company" name, for example the big intro could read something like "Worldwide Holiday Pictures - Presents - Another Great Slideshow".

It will of course look better when the text is set up properly.

In this simple example the scene opens with a blank colour board, the text is shown as single characters and appears from every angle.

The effect is to keep the viewer interested while at the same time promoting "Your" production.

The text on this screen fades away and the words "PRESENTS FOR YOUR PLEASURE ANOTHER GREAT SLIDESHOW FROM..." fades away again and is followed by your name.



As said before, a continuous slideshow over, say, twenty minutes would most likely get a little boring and not do your pictures justice. With that in mind, try a few combinations of the following:

After your header, try using a combination of several different slideshow styles interspersed with three or four stills which can be made to appear and disappear with keyframes, and now with PD16 you can even use the Video Collage Designer to insert some video, or it can be used to display still pictures.

Between each slideshow style place a suitable transition to make the the project flow smoothly. It is also possible to split a slideshow in a suitable place should you decide to insert some more media.

## **Music**

It is essential to match the music to the type of project you are creating. Matching tempo to movement helps keep the project balanced. It is not necessary to use background music in a slideshow, if you don't need the beat to match the slideshow, music can be placed in the audio track instead giving greater control over positioning and volume.

## **The end is as important as the start**

You previously made a header to give the project some impact, but it is just as important to finish the show with a bang. Again, make a short ending sequence that will keep the audience watching until the screen goes black - if you can do that you will have succeeded.

Remember the five-second rule too - if a still picture, or video for that matter, has no movement for more than five seconds the audience will tend to lose interest.

Enjoy!



## Places to visit

### Tutorials—inc. PDR16

- [Official CyberLink Tutorials](#)
- [PD University](#)
- [Hans van Kempen's Starter Course \[for Dutch users\]](#)
- Also many of [PDtoots tutorials](#) are useful to PD users.
- [Jimlowa's Tutorials](http://sharperturtle.com) <http://sharperturtle.com>
- [PowerDirector Tutorials](#)

### Members Resources Websites

- GodfreyZA's Templates: <http://oneclickmobi.com/powerdirector-templates/>
- Barry Gill's resource page: [http://www.bgillcyberstudio.com/barry\\_gill\\_cyber\\_studio\\_002.htm](http://www.bgillcyberstudio.com/barry_gill_cyber_studio_002.htm)
- Eric Matyas music page: <http://soundimage.org/>

### Useful Documents

- Future Suggestions:
  - [Q2 2017 wishlist](#)
  - [Q3 2017 wishlist](#)
- Guide to Good Posting : [Before Posting](#)

### Resources

- DirectorZone
  - [Effects, particles etc.](#)



#### Request for sample video files

[Barry The Crab's site](#) has a wide selection of interest to editors, including sample files from many camera sources to trial or work with, donated by other members etc.

HE NEEDS MORE SAMPLES TO KEEP THE COLLECTION UP TO DATE!!

Please consider visiting and [uploading samples](#) that are not already available, it will help support a good service.

