



# Dealing with DATA

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Andrew Leen from Performance Film and Media Insurance

CalDigit. All three makers have various models of drives that can be used to back up and clone your cards once ejected from the camera.

We looked firstly at the LaCie Raid drives. I have come across Raid drives before, but did not realise there are mainly different types. We looked at three main drives used to store and back-up your data.

**RAID 0** – splits the data across two drives.

**RAID 1** - mirrors copies of your data to two drives.

**RAID 5** - data is striped across up to four discs with parity between each disc

If you would like to investigate LaCie Raid more, I found a very good explanation of all the different types of Raid drives on the LaCie website at this page [www.lacie.com/support/faq/faq.htm?faqid=10607](http://www.lacie.com/support/faq/faq.htm?faqid=10607)

We then had a brief discussion with Dave about portable Raid drives and GTC members raised various points about cable connections into drives

The first morning session, given by Martin Greenwood and Adam Welsh from YoYotta, presented us with a talk on camera formats, the processing of data in the camera and how to organise the media and record 'back-ups'. With a PowerPoint presentation, Martin guided us through a range of cameras explaining the workflow, recording system, file types and interface system of each camera.

### ORGANISING MEDIA

After looking at the workflow of a range of cameras and an explanation about recording and storing data, we were introduced to YoYotta ID.

This is Yo Yotta software that runs on Apple Mac hardware. ID allows you to organise your media and keeps a log of the type, number and size of files. It can also make copies and back up your data within ID. It can also create a YoYottaID PDF report that can be automatically emailed to you.

More information at <http://yoyotta.com/YoYottaID.html>

Even on our home computers we have possibly experienced a situation where we have several drives containing several files of different formats, all stored in various folders. One way of avoiding this when dealing with media data, is to combined all the data together and use YoYotta ID workflow.

Martin explained how YoYotta ID workflow can be used to store data using an Apple Mac Mini and a LTO (Linear Tape Open) drive system. Software called LTFS (Linear Tape File System) is used to allow you to drag and drop files onto tape, as you would on a computer. More information about LTO drives and LTFS software can be read later in this article.

We were also given information about the YoYotta YoYo application that you can download to your iPhone. Using QR codes on a labelling sticker attached to your media cards, this app allows you to read information off the media card onto your iPhone.

More information about YoYotta systems and software can be found at <http://yoyotta.com/index.html>

There then followed a well deserved GTC and Top-Teks networking coffee break... Andrew Leen, from Performance Film and Media Insurance spoke on how Performance Insurance can help GTC Members in many ways – including information about Data Protection, through to Cyber Liability and Hacking Insurance.

I hadn't realised that there is so much insurance cover available to people working in the media business and Andrew's talk gave a lot of information on how to insure, cover and

protect ourselves before we take on a contract right through to the post production stages. Here are a few outlines of Andrew's presentation related to data: Always check the Terms of Business. This should stipulate whether the data is yours or the client's. Check at what point the data changes from you to your client. Andrew's slide presentation also explained the different types of professional indemnity insurance his company can provide and I would recommend taking a look at the Performance Film and Media Insurance website [www.performance-insurance.tv](http://www.performance-insurance.tv) A full report on Andrew's presentation can be found in his article, 'Insurance MATTERS' on page 25.

Many thanks at this stage in the day to Top-Teks for proving the GTC members with a very nice buffet lunch.

The afternoon session started with a talk and presentation by Dave Robinson from CCK. The main subject of the talk, - data management. Dave introduced us to three makers of desktop drives LaCie; G-Tech and

Mike Thomas from Top-Teks introduced us to the day's programme and gave us some very reassuring advice about using card cameras and Toptek's own approach to card technology and the sort of support that they can provide to their customers.

From Mike's experience, Top-Teks have seen very little data loss from card cameras compared to tape cameras – such as tape drive faults, faulty tape mechanisms etc. Most of us will have experienced in our careers quite a few 'tape dropouts' and accepted them as 'just one of those things' when shooting on tape – but to hear about a shot lost due to missing data on a camera card is considered to be a major disaster.

To quote Mike Thomas – "Solid State is a Good Thing!" Mike also explained that on some occasions production companies specify that a programme needs to be shot on a particular card system, but cannot always explain why that particular card

system has to be used for the programme. It can sometimes just be a simple case that they only know of one card system, or that's the system they have used before. As cameramen we should be encouraged to investigate all of the different card formats and be prepared to ask productions why they want to use a particular system. We should also be able to offer them alternatives card formats that might better suit their data workflow and production requirements. Obviously from a cameraman's point of view we are most likely to try and stick with a

particular make or model of camera we like to shoot on, with a card system we are familiar with. However it soon becomes apparent, in these ever changing times, that every new camera means a new and different card system and a different format to learn. So the more knowledge and up-to-date information we have the better.

The workshop offered not only a lot of information about camera formats and card types, but also how to deal with data after it has left the camera



Yo Yotta ID software

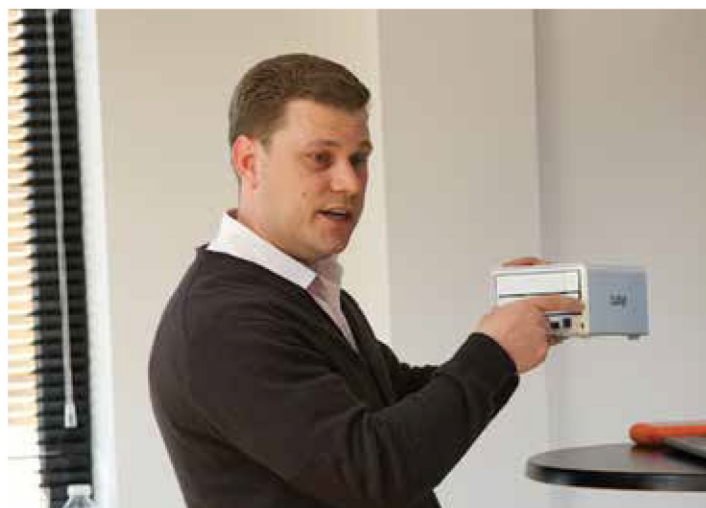


Yo Yotta ID workflow

If like me, you have spent most of your television career shooting on film and tape and only in the past few years have had to try and understand and deal with various camera-card formats plus 'attached to camera' hard disc recorders – such as a Nanoflash – then a day spent learning how to deal with data would come in very useful. Hence this 'Dealing with Data' workshop sponsored by Top-Teks on May 1, 2013.

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and reliability of portable drives

The discussion was based around the LaCie Rugged Mini 5400 RPM - 1Tb – you will recognise this drive as having a unique scratch-protected aluminium shell and a shock-resistant rubber bumper coloured orange.

Although advertised as being 'rugged' it was suggested that you should always unplug all cable leads from the drive before stuffing it into its bag (the pins in the sockets are easily damaged) and although advertised as being shock resistant up to one metre if dropped – it's best not to drop it!

Most desktop and portable drives now have USB 3.0 connections and can also run with Thunderbolt technology. Thunderbolt allows your data to be transferred up to 20 times faster than using USB 2.0 - important when you are waiting for cards to be transferred at the end of a long shooting day. Be sure to take a look at CCK's website and the other manufacturer's websites that Dave mentioned in this particular session.

Other options for storage of media data (also mentioned by Martin Greenwood from YoYotta in the morning

session) is a tape based system developed by IBM and Hewlett-Packard, used for the back-up and archiving of computer data. Not surprisingly this tape-based system is also being used by production facilities that need to store large amounts of data. LTFS (Linear Tape File System), is used to store files onto a data tape cartridge system or LTO (Linear Tape Open)

LTFS partitions files into two segments, storing a directory file structure and data pointers into one partition and the data itself into a second partition. Applying a file system to a tape allows users to organize and search for content on tape, as they would on hard disk. This gives quicker access to data stored on tape and the LTFS makes it possible to drag and drop files to tape in the same way that files can be dragged and dropped to disk.

As well as storage systems to store data before editing and for back-up, we were also shown different methods for archiving data. These were a range of HDD (Hard Disc Drives), SSD (Solid State Drives) and ODA (Optical Disc Archive).

Optical Disc Archive or ODA, is a new generation high capacity storage system set to revolutionise video and data archiving. Sony developed the ODA system to help provide long-term data retention and

### Further reading on desktop and portable drives

<http://www.cckmedia.com/index>

<http://www.lacie.com/uk/index.htm>

<http://www.g-technology.com/products>

<http://www.caldigit.com/products.asp>

management of media assets in a way that is simple and affordable. At the core of the ODA system, is a cartridge housing 12 optical discs and a specialised drive unit, the ideal solution for large scale long term archiving. The ODA drive is easy to set up and comes equipped with a USB cable and a 300GB starter media cartridge Optical Disc Archive or ODA, is a new generation high capacity storage system set to revolutionise video and data archiving.

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I found Dave Robinson's talk very informative and it allowed me to understand a bit more about the hardware that is available to store data material on.

The final session of the day was Martin Greenwood from YoYotta again, talking about software for production and post workflow.

YoYotta's YoDailies software runs on Apple Mac hardware. It allows you

to view any shot metadata in picture. This is handy to identify shots when there are multiple cameras in use YoDailies allows you to also grab JPEG, DPX and raw frames, to analyse for colour correction etc.

All picture and sound metadata is also automatically captured. This includes media serial numbers, and camera lens information. Any metadata can easily be graphically burned into the transcoded files. Metadata can also be exported in ALE or XML files. It's easy to filter shots by resolution or codec in the Metadata viewer. More information about YoDailies at <http://yoyotta.com/YoDailies.html>

So the 'Dealing with Data' workshop at Top-Teks gave a very good general overview of the cameras, the different card systems and the solid state recorders that are available. Storage of data, backing up, archiving and logging the material we shoot was covered in depth plus, away from the technical side, a look at the potential business pitfalls that can occur - unless due care is exercised.

