DIGITAL PRODUCTION
CHALLENGE II

2010 Technical Focuses

Technical Focus 1 (by Ph. Ros): Camera and Focus Problems

Trust your DoP when choosing a camera. He should have checklists for every camera. Also ask the colorist – he sees more cameras than any cameraman. This is better than trusting the rental house since you can never test all the cameras available.

To control focus problems for a big screen release, you need a monitor of at least 23" diameter. A 17" laptop monitor is not sufficient. With 35mm cameras you have some range before being out of focus — if a digital camera is out of focus, it is totally out of focus.

Ask your DoP and the post house — they can act as "control tower". Think about workflow and ergonomics, this can save you a lot of money at the end.

There are two different levels of tests to be done before the shooting:

- tests of the recording devices at the rental house.

- aesthetic choices such as the look of the picture, skin tones, costumes etc.

You want to make a good movie and at the end this is more a question of content than of high-end-quality. Don't be fixed on the camera but think from the end.

Technical Focus 2 (by Ph. Ros): New Jobs in Production and in Post: The job of the Digital Image Technician DIT

The job of the DIT is not really defined yet in Europe except in Germany. The DIT has to validate the "internal lab" of the camera and adjust it for the workflow and aesthetic tests. His task is to prepare the camera for grading in collaboration with the post house. In multiple camera shoots, the DIT has to align the different cameras electronically in order to achieve the same colour range in output. He must also give the camera specific parameters for output in different national systems (e.g. USA, Japan).

Besides, someone has to be in charge of the data management in file-based workflows. Data unloading takes time and data must be checked. For an insurance (depending on the countries), it is not enough if this is done by a clapper and loader – it has to be a proper DIT or a data manager or data wrangler. Again, the decision on taking on board a DIT or a data manager should be taken starting from the desired output. If you plan a theatrical release and are shooting with tape-based systems, taking a DIT is the best choice. For TV a camera assistant with special training should be sufficient.

Technical Focus 3 (by Ph. Ros): Tape Based vs. File Based

It is always advisable to take the post house as a kind of control tower to decide how to record – based on shooting constraints and exhibition devices.

Three typical cases have been examined:

- Shooting "on an island": tape or optical disks are a safe and more robust choice than files. Optical disks are very safe and cheap. They have the advantage of giving you proxies which the director can give to editing. Its size is very thin which makes it easy to handle in documentaries and when shooting abroad. However, always check before with the post house what they can handle.

- Shooting "in the jungle": Again tape and optical disks are the choice since they can tolerate the humidity. Do not take HDD because it would require too much computer hardware to transfer the data.

- Shooting "in the studio": HDD or cards are chosen, because of the easy-to-control environment of the studio. Cards may even become a storage device as soon as their price comes down. Right now it is still too expensive. Transferring on HDD and erasing the original is not safe enough, the most reliable support is still making two backups on RAID 5 HDD's or LTO tapes (see Focus 2009 on archiving).

Technical Focus 4 (by Ph. Ros): ARRI Alexa

ARRI Alexa is a small camera (approx. the size of an ARRI 416), which will be a main factor of its success. It has efficient and versatile workflows if you have a good data management. You can mount big 35mm lenses without unbalancing the camera. The image is film-like. The DoP can trust the "internal lab" of the camera. The De-bayering process works well on the one-sensor-cameras Alexa and D21 which have a real-time de-bayering and a good restitution in monitoring and pre-visualization, so what you see is more or less what you get.

On the contrary, de-bayering is an adventure on RED, it was not really reliable in recording and pre-visualization on former RED One before the M-X upgrade. The image has to be reconstructed in post, which takes time.

During night shoots there was almost no noise, no texture – it seemed to be a day-shoot. The monitoring is very reliable. You have multiple output options but we still don't know anything about the life cycle of the SxS cards. Alexa is direct to edit, very much prefers Mac. For a standard movie, the data output is around 4Terabyte for Alexa while it is around 1 terabyte for RED. Regarding sound it seems not very much reliable in recording external sound. ARRI secured a number of partners to anticipate problems which could arise during post – which was the main point of critique with RED.

The cost is around 60.000 €.