

STORAGE MAKES THE WORLD GO ROUND

Digital Studio invites industry professionals to share how technology is altering the face of the business. This month *Kushal Shah*, storage architect, shares his thoughts on the storage challenges facing the industry



Management of Digital Assets is clearly not the glamorous part of the media and entertainment business, but it certainly is the most important. Productivity is highly enhanced by the ability to manage your digital assets, control multiple versions and accurately assemble the final film. And any data centric work flow must have a strong asset management system to back it up.

I consider storage the centre of our Digital Universe. Just like how all the planets in our solar system receive their source of energy through the Sun, all workflows at every stage of content are useless without storage, be it shared and centralised between all the different connected systems or local to particular systems.

Earlier in history every film had workflow-based negative cutting. Later on it moved to EDL based offline editing on NLE systems. Today it's more of a data centric workflow: the film negative is scanned and colour graded; effects are created, conformed, and finished digitally; then the final is recorded back onto film. Shortly, the trend towards adopting a completely digital work flow from pre – to final delivery for theatrical exhibition will prevail rather than just using it for post.

There will be more need than ever before, in such a situation, to address storage concerns by an organisation, irrespective of its size. In addition to the sizeable storage support that any DI system requires, the infrastructure for

moving data is equally important.

The ideal storage area network should provide a single centralised storage that could, without any interruption of real-time streams, provide enough performance and capacity for all of the ingest, image processing, output and miscellaneous data accesses occurring simultaneously throughout the facility and do so at an affordable price that provides a compelling return on investment for the facility.

If the facility is working on more than one project within the same time frame, it may additionally be necessary to extend the workspace to accommodate multiple projects simultaneously to avoid excessive delays, loading and unloading projects. This extended space might not have to be accessible in real-time, but it must be relatively quick to swap projects in and out of the real time workspace; it would probably therefore also have to be based on disk storage.

Historically, the industry has shied away from traditional centralised (SAN-based) storage due to high capital and operational costs with low perceived value over local direct-attached storage. Many customers in this industry view storage as a low-value commodity, which is interesting for an industry that uses the term "asset" to refer to digital content. Fortunately newer SAN storage offerings and the introduction of low-cost technologies such as high performance NAS are changing the buying behaviour of the

industry. Centralised storage in a company that creates rich visualisations has some non-obvious operational benefits. When assets are stored centrally they can easily be tracked, monitored, and reused. This leads to improved production efficiencies which leads to shorter production times, meaning that company can deliver projects in a more predictable time frame.

Data management of digital assets is most of the time overlooked in India. It is quite common for facilities abroad to develop proprietary asset management systems as a part of their workflow thereby increasing their efficiency.

In India there are several basic challenges facing the industry. To begin with is the lack of knowledge to deal with content in the digital universe right from creation to delivery. Then of course is the resistance to change: there is resistance from within the community to move to newer technology that end users are not familiar with. Lastly budget allocation and the amount of investment needed to transit into digital workflow are sometimes not planned well.

Recently, the importance of storage as a separate product and not as extensions to systems is being understood, and significant investments towards it are being made. Today with the user being aware, there is a more dynamic business challenge facing all of us. ■



Kushal Shah is director – Technologies at Jay Kushal Exports Pvt Ltd who provide end to end technology solutions for media and entertainment for all the aspects of content lifecycle



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