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- Sidharth Meer, CEO, The Bridge

Located in the heart of Bollywood, Mumbai, India's entertainment industry, The Bridge is a post production facility specializing in on-set dailies, data archiving, conform services, color grading, and post production workflow design and management. On-Set Lab is the company's portable camera master field archiving and color grading solution used to manage the entire workflow for their feature film clients.

The Bridge has an extensive roster of feature film projects, including the winner of the Cannes Film Festival's International Critics Week Grand Rail d'Or Award, Ritesh Batra's Dabba (The Lunchbox). Other film projects include: Bombay Talkies, Ship Of Theseus, M-Cream, Hasee Toh Phasee, The Bastard Child and Academy Award® winner, Danis Tanovic's White Lies.



"The Lunchbox" photo courtesy of  
Sikhya Entertainment Entertainment

▶ THE CHALLENGE



The Bridge's On-Set Lab

In order to become fully operational as quickly as possible, The Bridge needed an LTO LTFS workflow solution that would easily integrate into On-Set Lab.

As The Bridge's clients shot more 4K and other high-resolution file-based footage for feature films, the cost to record and store media increased dramatically. "We required a fast and simple LTO LTFS workflow solution with which we could quickly offload high-resolution raw camera media in the field from the On-Set Lab to help streamline the pipeline and manage storage costs for our clients," said Sidharth Meer, CEO, The Bridge.

Because archiving to LTO was not yet considered to be an essential part of a file-based workflow by many in the Indian film industry, production companies were willing to gamble by backing up to hard disk drives, which are not designed for long-term, shelf-stable storage.

As a result, some of The Bridge's clients experienced hard drive failures and loss of valuable data. "Hard drives are unreliable and costly, so it was critical that we offer a more dependable archive-restore solution to secure our clients' file-based assets," continued Meer.

Manually conforming high- and low-resolution media significantly impacted labor time and costs for The Bridge's clients, so it needed to streamline this workflow. A high performing archive-restore solution would enable the post facility to provide critical data management and conform services and demonstrate clear return on investment for feature film production companies.

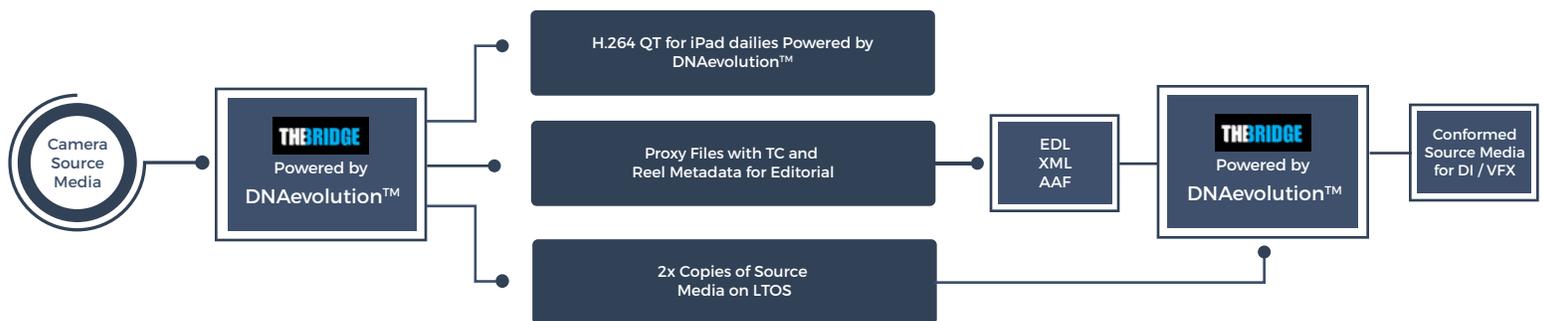
## ▶ THE SOLUTION

"We chose DNAevolution to be the backbone of our On-Set Lab because StorageDNA has the best technology to help our producers achieve all the functionality they need, while bringing down the cost of storage," said Meer.

The Bridge easily deploys DNAevolution model M100 from its On-Set Lab, using a MacBook Pro® with a single HP® tape drive, connected via ATTO® Thunderlink™, for high-speed field archiving of digital camera master data, and has added a second system for in-house use. "One of the biggest benefits is that due to the small form factor, DNAevolution can be deployed on any kind of hardware for the field," explained Meer. "At the same time, the system is powerful enough for our post production work and does it all with cost-effective and shelf-stable LTO tape."

"The award-winning film, Dabba (The Lunchbox), was our first project with DNAevolution in September 2012," continued Meer. "Since then we have experienced such impressive results and DNAevolution's unique conform process saves so much time, that we added another system for additional projects that is dedicated to conforming media directly from LTO tape. In the past, a post house would take a few days for conform, but now we are able to get timelines conformed and delivered within hours for finishing."

**With DNAevolution in its On-Set Lab, The Bridge is able to streamline 4K+ pipelines for its film production clients:**



### Digital camera master archiving in the field

- Media coming out of the camera is recorded directly onto two LTO tapes with LTFS formatting
- One LTO copy is provided to the client and The Bridge maintains the second LTO tape
- Low-resolution version is created, lightly color graded and sent to editorial

### Approvals workflow

- H.264 proxy version is created for the addition of suggestions and comments from producers and other non-editorial team members
- Via the built-in archive asset manager's web interface, the H.264 version is incorporated into the project and comments are displayed

### Conform services for finishing

- EDL is provided to The Bridge when the final edit is ready to go to color grading and finishing
- The Bridge uses DNAevolution's Smart Conform to quickly conform the high-resolution media directly from the LTO
- Conformed high-resolution media and EDL are sent to the finishing lab on a hard drive

### Long-term archival

- Media is stored on LTO tape and can be easily accessed and restored when required again for an alternate cut, re-release or other purposes

## ▶ THE RESULT ◀

"The most convincing argument for LTO and LTFS technology we can make with producers is to show them the savings achieved when comparing the costs of hard disk drives to LTO tape. Now that we offer conform services using DNAevolution's Smart Conform, it is obvious how much simpler and more cost-effective the workflow has become because we conform and deliver timelines at a substantially faster rate than was possible before."

All of The Bridge's feature film projects to date have benefited from substantial cost and time savings due to the performance and advanced LTO LTFS media workflows enabled by DNAevolution in the On-Set Lab. Because DNAevolution is a direct-connect solution, Meer's company is able to field archive 4K and higher-resolution file-based camera media at very high speeds of over 800Mb/sec to LTO-5 tape.

### Cost savings

- 50% - 70% combined storage costs savings
- Eliminates labor costs for manual conforms
- Secure data reduces reshoots and keeps feature film budgets in check
- Easily accessible, 100% open content maximizes future monetization of media

### Time and savings

- High-speed offloads of camera data in the field keeps project schedules on track
- Conforms directly from LTO tape that takes hours, replaces slow manual process requiring days at the finishing post house

With DNAevolution in the On-Set Lab, The Bridge has helped clients save time and costs for the following feature film projects. "These are not the problems of just a few film production companies," concluded Meer. "Most media and entertainment companies will need to solve data management challenges caused by 4K and higher resolution file-based workflows, and waiting to deal with these issues is a risky proposition. With DNAevolution, we are able to simplify our clients' workflows and make the entire pipeline more cost-effective. Simply put, StorageDNA offers the most innovative technology available on the market today with best-in-class support."

### Ritesh Batra's Dabba (The Lunchbox)

The producers of Dabba, winner of Cannes Film Festival's International Critics Week Grand Rail d'Or Award, needed to secure and reduce the amount of data because the project was shot in Mumbai, sent to New York for edit, and finished in Mumbai, Paris and Berlin. "We are extremely happy to be working with The Bridge and StorageDNA, and as a result our workflow has become more streamlined and faster. They provide a crucial resource that we will be using in all of our upcoming projects," said Guneet Monga, producer of Dabba and Danis Tanovic's film, "White Lies".



### Phantom and Dharma Films' Hasee Toh Phasee

The feature film, Hasee Toh Phasee was shot over 67 days resulting in 40TB of camera master data. Producer, Dipa De Motwane's, primary concern was to archive and protect the data, "The workflow designed by The Bridge gave us data security on LTO, something all producers worry about in the age of digital filmmaking". "We had a problem on an earlier project where our drives crashed and our backup was on LTO-4, but it was not formatted for LTFS. Retrieving the data shot by shot was a painstaking process that took hours. The Bridge transforms this process for us with DNAevolution's conform from LTO," explained Anup Nair, post supervisor, . In addition, the Bridge helped the producers realize a 70% cost savings for storage, by using LTO tape to replace expensive hard disk drives, [the cost of LTO ₹2,08,000 (USD \$3,333) versus HDD ₹6,90,000 (USD \$11,056)].

### Maktub Entertainment's The Bastard Child

The stakes were high for first time feature film producers investing their own money in a large scale production. Due to budget constraints, a very tight schedule for the 50 day shoot with limited actor dates, they couldn't afford to lose any camera master data. Lowering storage costs was also important, so The Bridge used DNAevolution to securely archive 20TB of camera master data to LTO tape, saving the producers 74% compared to the cost of hard drives, [the cost of LTO ₹97,000 (USD \$1,554) versus HDD ₹3,68,000 (USD \$5,896)]. "Our project is a small budget film, but on a large scale because it is a period film. We are fortunate to have well-known actors such as Pavan Malhotra, Victor Banerjee, and Farooq Shaikh, but they were available for very limited dates and we had to stay on schedule. If we lost any data from any day of shooting, getting back the actors, crew and locations would have been close to impossible on our budget," said Soumya J. Dewrat, producer, The Bastard Child.