

# ELEMENTS CASE FILE: Mach2Media

## WHO?

Mach2Media is specialized in developing and realizing high-end concepts and designs for sophisticated and renowned sports events and shows. For moving picture projects such as documentaries, image films, commercials and all other video based content, Mach2Media provides the entire range of production services, starting with creating the storyboard, to filming, to executing the post production. For live events and installations on the international stage, Mach2Media invents cutting-edge concepts, utilizing the most innovative technologies such as holographic 3D and interactive projection. A large number of international clients in the field of sports, such as soccer, boxing, and motorsports like Formula 1, rely on the vast experience and expertise of Mach2Media to create conceptual designs that tell the story in the most exciting and innovative manner.

Mach2Media has won numerous awards, including Eyes&Ears (gold), German TV Award, Promax Award for the staging concept and design of the Boxing Heavy Weight fight of Klitschko that was aired in more than 135 countries worldwide.

[www.mach2media.de](http://www.mach2media.de)



## WHAT?

**The Basics:** In the course of producing the German edition of the GT Academy TV show for the past three years, Mach2Media has managed to establish a new standard and an unmatched benchmark for high-quality. Hence, Mach2Media was selected as the central hub for the worldwide GT Academy 2015/2016, a driver development program that turns gamers into racers, initiated by collaboration between Gran Turismo 6, exclusively on SONY PlayStation, and Nissan. Players who qualified as top drivers within Gran Turismo 6 will be invited to participate in actual races within each eligible country, embracing 24 countries worldwide:

### EXPECTATIONS + REQUIREMENTS

- Centralized storage for **remote read and write access** to media assets from 24 countries;
- MAM for **global high-security access**;
- Enhanced **communication support** to simplify review and approval processes;
- Easy and fast creation of **proxies**;
- Full **compatibility** with Adobe Premiere Pro CC;
- Increased data security with an **automated 3-stage back-up** routine;
- Additional **back-up on tape**;

**Europe:** France, Italy, Germany, UK, Spain, Portugal, Belgium, Netherlands, Luxembourg, Poland, Hungary, Czech Republic  
**Asia:** Indonesia, the Philippines, Japan, India and Thailand  
**International:** USA, Mexico, Australia, Turkey, Egypt, Morocco, Algeria

While the final race of the GT Academy 2015 was held in Silverstone, UK, every regional race has been recorded with over 50 cameras, including two RED Epic, Sony PMW-F55, Sony PXW-FS7, one (video) drone and 30 GoPro Hero4.

An international team of editors, located in 24 countries around the globe, required instant online access to the recorded video material, including on site ingesting of new footage to the master template Mach2Media has created to replicate the high-quality standard established in the German edition of the show. As the editors had to start indexing the footage immediately after it became available, proxy

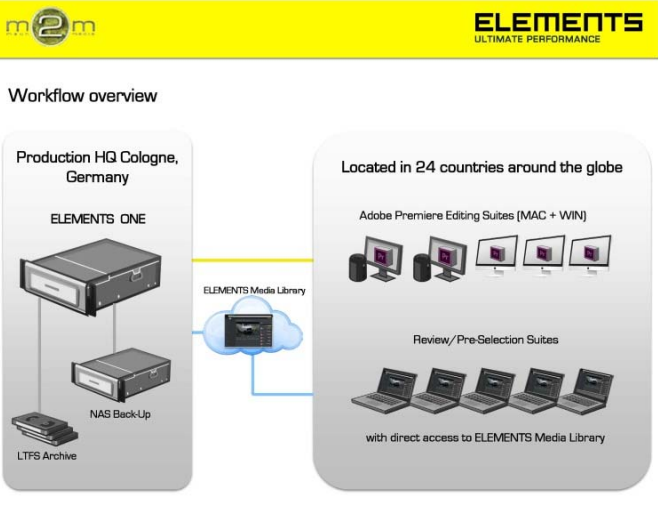
images were critical to preview and select appropriate footage. The final editing of the material will be conducted on site using Adobe Premiere Pro CC, while the editors require both read and write access to the storage. As with every live-event, increased data security through automated back-up routines are necessary in this de-centralized realtime workflow. In addition, back-up on LTO tapes was requested.

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## HOW?

The greatest challenge of this unusual setup and rather complex set of requirements was mainly posed by the need for a solution that would not only provide sufficient media storage space with appropriate performance but, at the same time, grant parallel access to an advanced MAM with enhanced features. After evaluating the options, the experts at Mach2Media realized that ELEMENTS' product range was able to provide everything they need from one source.

The combination of ELEMENTS ONE all-in-one server and storage appliance with ELEMENTS Media Library, and ELEMENTS ARCHIVE with LTFS-support would not only fulfill the entire range of needs but add additional benefits, such as the option for workflow automation and increased data security.



## The Solution

### The setup:

- ELEMENTS ONE 24bay with 72TB raw storage space;
- 7 clients connected via 10GbE;
- ELEMENTS Media Library;
- ELEMENTS ARCHIVE T24 Tape Library;

### Added value with ELEMENTS proprietary features:

- Native project sharing support between the editors worldwide;
- Added project security with **sophisticated project and user management**;
- **Automatically generated proxies**;
- Extra-level of data security with **token-based authorization codes**;
- **Significantly simplified communication** and approval processes with unique features in ELEMENTS Media Library;

### Remote read/write access

Two centralized storage systems provided by ELEMENTS, one with 41TB located in Silverstone (UK), the other one in Abu Dhabi (19TB), headed by ELEMENTS ONE, have an embedded user and rights management that supports advanced and individualized user management. Both storage systems allow authorized users/editors to ingest footage remotely and access the assets from anywhere through ELEMENTS Media Library.

### MAM for high-security access

ELEMENTS Media Library provided access exclusively to accredited users, authorized through the embedded user and rights management tool. However, once a user has been authorized, he/she can leverage the entire range of features provided by the Media Library from anywhere and with any standard PC or Mac or any other device available.

### Easy and fast creation of proxies

ELEMENTS Media Library enables users to set event triggers for every project folder within the MAM to automatically initiate customized actions. In this case proxy files were created automatically when new footage has been written to certain folders.

### Full compatibility with Adobe Premiere Pro CC

ELEMENTS is fully compatible with Adobe Premiere Pro CC and allows for full project sharing;

### Increased data security

ELEMENTS has implemented an automated 3-stage back-up routine that guarantees data security. For an additional layer of security, the system provides the option to create unique token-based access keys that only the dedicated team member can utilize.

### back-up on tape

ELEMENTS ARCHIVE with LTFS support backs-up the data on redundant LTO tapes on a regular basis. Additional back-ups are conducted on an external NAS;

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## **ONE MORE THING...**

When Mach2Media eventually reached the limit of their media storage space, the experts at ELEMENTS doubled the storage space by simply adding a JBOD expansion. ELEMENTS' unique technical design made it possible to implement this extension without conducting any data destructive tasks, let alone shutting down the system: during operation the additional expansion was easily added, and within minutes Mach2Media had 96TB raw (or 86TB net) storage space available instead of 46TB raw they had initially purchased.

## **NOW WHAT?**

ELEMENTS deployed a solution that allows Mach2Media to manage and supervise the production and post-production of a global TV show centrally from one spot, leveraging the various features of ELEMENTS ONE and the Media Library that simplified collaboration every step of the way. The feature-rich server and storage appliance facilitated a sophisticated user and rights management to guarantee all authorized editors not only simultaneous access to the footage but let them share the entire project natively – without the need to conduct time consuming uploads/downloads or tedious transcoding tasks.

By creating a pre-defined “show framework”, the international team of editors were able to utilize the rough-cut editor embedded in the Media Library to ingest the locally recorded footage into the template - directly to the centralized storage ELEMENTS ONE. This unique option allowed Mach2Media to eliminate the need (and the costs) of travelling of both the producers and the editors. Mach2Media leveraged a lot wider variety of the features provided by the Media Library though. For instance, the embedded event trigger feature embedded in the Media Library proxies were created automatically as soon as new footage has been ingested to a particular folder, reducing both the manual effort and the potential risk of human failure significantly. Despite the great distances between the numerous production locations, the communication and approval processes were prompt and easy thanks to ELEMENTS Media Library embedded in ELEMENTS ONE. Some of the unique features in the Media Library Mach2Media took advantage of:

*“ELEMENTS is the only vendor capable to supply us with fast and highly secure storage plus a sophisticated, yet easy, user management. And ELEMENTS’ fantastic Media Library made a project of this scale possible at all.”*

**Simon Südel**  
Head of Production  
Mach2Media



### **Frame-accurate Notes**

Leaving unlimited comments and notes for any frame or clip to get instructions and wishes across based on the actual image - without the need of complicated explanations or potentially inaccurate time code references - simplified the communication significantly.

All comments and notes were visible and accessible from any Premiere Pro workstation.

### **On-screen Drawings**

Pointing out issues with an image were easy by drawing directly on the image with the on-screen drawing feature provided by the Media Library – with any mouse or touch screen from any standard PC, Mac or tablet.

### **Automated Email Notifications**

Sending automatic tailored email notifications through Media Library's event trigger feature reduced time to completion significantly, as updates and new versions available were communicated instantly to all relevant people; hence, approvals (or disapprovals) were submitted much faster.



**Mission accomplished.**