

## TF1 AND DELTATRE

### BRINGING MAJOR SPORTING EVENTS TO A GLOBAL AUDIENCE

Coverage of the biggest international sporting events attracts a worldwide audience. While teams from countries around the globe battle it out on the field, fans back home eagerly tune in to see all the action. To bring these events to more screens and viewers than ever before, broadcasters and media services companies are contracted to deliver live and on-demand video to online, mobile and set-top box audiences. Recently, both TF1, a broadcaster in France, and deltatre, a pan-European IT and media services provider, developed lengthy lists of streaming requirements for each of their independent applications. The likelihood of just one vendor meeting all the requirements of both companies seemed out of reach. Is it possible that these two different organizations could make use of a single underlying technology for all their video processing needs?



### BACKGROUND: TRAIL BLAZERS IN SPORTS MEDIA

French media company TF1 Group owns or has holdings in more than ten television channels, including TF1, the largest private television channel in Europe, and Eurosport, the largest television sports network in Europe. TF1 originally stood for Télévision Française 1; the abbreviation was adopted in 1987 when the channel was privatized. TF1 has an average market share of 25-35%, making it the most popular network in France. Its content is distributed to consumer households via broadcast, IPTV, and broadband delivery.

The deltatre group is the world's leading provider of data processing services and media management solutions to major sporting events. Established over 20 years ago, deltatre serves major sports federations including UEFA, FIFA, IAAF and the IRB. The company is headquartered in Turin, Italy with offices and a large production facility in South West London. deltatre's services include generation of on-screen graphics, player tracking systems, statistical data gathering and video highlight creation.

Although TF1 and deltatre operate in very different markets to service different clients, both possess deep expertise in bringing international sporting events to audiences through traditional broadcast and via web and mobile devices. The key to success for these two industry leaders is the ability to offer their respective customers innovative technical solutions that meet the rapidly expanding requirements of the sports video market. Delivering streaming video for top sporting events is a mission-critical task and if properly executed, can elevate the standing of both companies' services and solutions.

### CHALLENGE

- Meet tight deadlines for delivering video to an international audience
- Prepare and package video for disparate devices and players
- Integrate a solution that will deliver video quickly and efficiently

### SOLUTION

- Replace existing transcoders with Elemental® Server and Elemental® Live
- Transcode more content with fewer resources
- Harness the flexibility of a software-based platform

### BENEFITS

- Reduce workflow complexity
- Save money and manpower
- Deliver video to a wider audience

## CHALLENGE: THE LAWS OF THE GAME

For this particular sporting event, TF1 was tasked to deliver formatted video of full games to five different service providers throughout France for distribution to subscribers' set-top boxes. Complicating matters, however, was that each service provider required unique video encoding settings for its streams to play back properly once delivered to the end user. An assignment like this is not easy in an ecosystem without unified standards for media delivery through connected TVs and set-top boxes. Nevertheless, TF1 needed a complete solution quickly for its application.

Meanwhile, deltatre's mission was to develop and manage the official event website, the associated video application and all the mobile applications for the event. As a part of this undertaking, the company needed to edit, transcode and publish a highlights package of each match played for viewing on a wide range of online platforms, including the iPad, iPhone, Windows 7 phone and Android devices. Factoring in the need to support adaptive bit rate streaming on each of these platforms, deltatre determined that 22 distinct outputs were required for its application. To top it off, the customer mandated the process take no longer than 15 minutes upon each match's final whistle, leaving no room for error or protracted video processing. With a goal this aggressive, it was essential deltatre find an encoding solution up to the challenge.



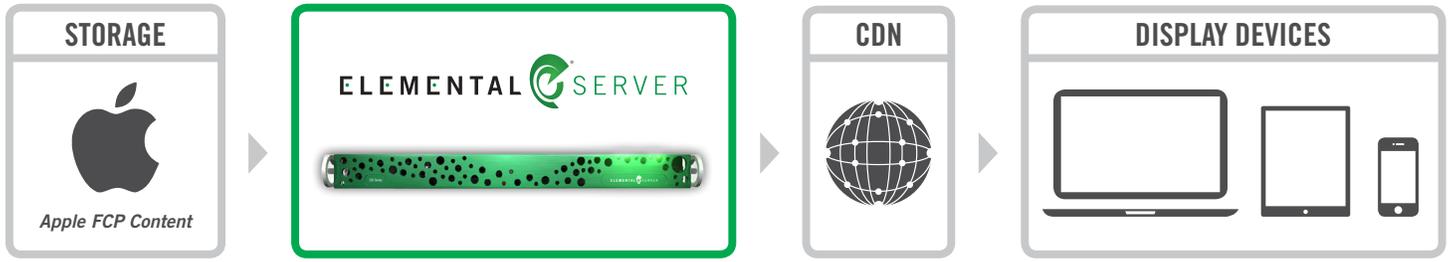
## SOLUTION: TAKING CONTROL OF THE OFFENSE

After looking for a solution to satisfy the many encoding requirements inherent to its application, TF1 found the answer in Elemental Live. Elemental Live is a massively parallel video processing system that provides video and audio encoding for live event streaming to online and mobile platforms. Powered by graphics processing units (GPUs), Elemental Live provided TF1 with the processing power necessary to deliver properly formatted video files to five major service providers across France.

## TF1 WORKFLOW



## DELTATRE WORKFLOW



In TF1's workflow, the Elemental Live system takes in a single transport stream which is then formatted into separate outputs for the five different service providers. Each output featured unique settings: one required high profile H.264 video while another needed main profile MPEG-2. Bit rates and resolutions varied across outputs. While most outputs were interlaced, one service provider required progressive streams. With other specific conditions around audio adding to the complexity of the project, Elemental's professional services team worked with TF1 to make sure each detail was carefully ironed out.

Initially attracted by the density available with the Elemental Live system and its ability to create multiple streams simultaneously, TF1 also took advantage of the system's flexibility, making use of the REST API to stop encoding of the event during commercial breaks. This enabled TF1 to create and deliver multiple files of a single program for each service provider, who in turn made that content available for viewers to watch from start to finish via their set-top boxes.

The deltatre application, on the other hand, which included delivering edited highlight packages in a time-sensitive offline environment, prompted the company to call upon Elemental Server to act as the transcoding engine. Elemental Server, which also takes advantage of powerful GPUs, is a file-based video processing system that provides faster than real-time, high-quality video transcoding for multi-screen video applications.

In deltatre's workflow, video editors carved each match into a five-minute highlight reel, using Apple Final Cut Pro to create a high quality ProRes mezzanine file. This polished source file was placed in an output folder continuously monitored by Elemental Server. Elemental Server detected and copied incoming files into the appropriate watch folders. The system then transcoded the file, simultaneously creating the required 22 iterations before uploading the finished products to Akamai for streaming to web, tablet and mobile devices. The workflow capped off with Elemental Server generating and sending notification of completed jobs to systems operators.

*“Elemental has been an excellent choice. They have seamlessly integrated into the workflow between our editing operations and publishing via the deltatre CMS. In total, 22 outputs are delivered to different locations feeding seven different platforms. The pure speed at which we can do the encoding is faster than real-time. This enables us to provide a superior service to our client as well as a top-quality experience for viewers.”*

**Chris Caitling**  
Operations Director, deltatre Media

**BENEFITS:** A WINNING RESULT FOR CUSTOMERS AND FANS ALIKE

With Elemental Live and Elemental Server, TF1 and deltatre were able to create all the streams they needed for this international event. The density advantage offered with Elemental solutions compared to competing products is clear, but other features and benefits available with Elemental systems made the difference for these two respected companies. TF1 needed a highly flexible platform to meet the complex video requirements of its service providers and they found it in the Elemental Live software. deltatre would not settle for anything less than the highest quality video for coverage of this premier sporting event, which Elemental Server was able to deliver.

The sheer density available with Elemental solutions creates significant cost savings for customers like deltatre and TF1 who are creating video streams for multiple protocols and platforms. For a major event like this one, these companies are accustomed to deploying multiple video processing solutions to meet myriad encoding and streaming requirements. Because Elemental systems can do more in a smaller footprint, both companies were able to minimize the cost of integrating this new solution while reducing overall workflow complexity. The flexibility of Elemental's software also ensures support for future video standards and protocols. Eliminating these pain points commonly found in transcoding and encoding applications is an ongoing priority for Elemental.

*"We immediately recognized the speed and performance advantage available with solutions from Elemental. With the deployment of Elemental Live, Elemental is now a major player for TF1 Group's streaming and catch-up services."*

**Philippe Petitpont**  
Project Manager, TF1 Group

**Ready to get started?**

Call Elemental toll free at +1 888.900.8104 to learn how to integrate Elemental Live and Elemental Server into your workflow.

**ELEMENTAL  LIVE**



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