

Athena: thrust into the flames of rebellion on Netflix

The latest film from Romain Gavras, *Athena*, is a modern-day Greek tragedy where a brother's tragic death throws his siblings' lives into chaos and ignites conflict across the Athena housing complex in the Parisian banlieue. The director opted for a tense mise-en-scene using Dolby Vision HDR to immerse the viewer in the action, with the camera in near-constant motion as it follows the protagonists one after another, often in close-up. Matias Boucard, Director of Photography, Mathieu Caplanne, Colorist and Jérôme Brechet, DI Manager at Color discuss their experience of working on the film.



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"I didn't know a lot [about HDR] to begin with.", explains Matias Boucard, Director of Photography. "I thought it would be complicated, particularly when it came to camera movements, fires, etc. I quickly realised that HDR gave a better sense of immersion, regardless of screen size." It was Netflix who suggested using Dolby Vision HDR to shoot Athena. The crew quickly started tests so they could get familiar with the technology. "We tested it using fireworks, explains Matias Boucard. "And we realised that colour retention was a lot better with HDR, particularly with the high lights you can see in flames, etc. The heightened dynamic range can help render more nuanced contrasts, and smoke

has a lot more volume too. When the actor's surrounded by fireworks, you can feel the danger. You're immersed in the midst of the rebellion. HDR gave us what we needed to create the images we wanted." According to Matias Boucard, while today's digital cameras have changed the perceptions and ways of working with low light, HDR allows for a return to working with high lights. You always have to look after whites to avoid them clipping, but the image has more detail, nuance, and colour variation so you can work in this part of the spectrum. "The moment I knew that over 100 nits give out ten times more than usual, I could focus on the rest.", says Matias Boucard. "It's a technical issue that challenged the way I light, and that influenced the style of the film as well as my own."



Image as a storytelling tool

Athena's ambitions and aims raised the question of immersion and spectacle - for every screen. And using Dolby Vision HDR brought answers. "With Romain Gavras, we wanted to do something outside the norm. We wanted to create something spectacular.", explains Matias Boucard. We used the Alexa 65 system, with a sensor made of three juxtaposed Super 35 sensors, to film in large format." The shortest focal length was around 30mm, the equivalent would be about 14mm with Super 35, but with different ratios between background and foreground. Matias Boucard managed to capture both the foreground and the full height of any buildings at the same time.

The unique attributes of Dolby Vision HDR images were swiftly put to use to tell the story, creating a cinematic experience with images that are a long way from documentary style.

"Early on - from the first filming tests with the actor on location - we knew that combining the texture of 4K with HDR brightness resulted in excessive definition", explains Mathieu Caplanne, Colourist. This was quickly solved by playing with less contrasting and more diffuse lighting.

“With HDR, we went for a more diffuse light as there was a natural brightness.”, Matias Boucard explains. It became an event, like with the fireworks scene.”

- Matias Boucard, Director of Photography

Adapting workflow - from filming to post-production

HDR brought a whole new set of features that impacted every stage of the shoot, from pre- to post-production. “HDR changed how I filmed.”, explains Matias Boucard. There’s no way that the floor could be wet as it would add too much shine. It also altered makeup, lighting”, but sets and costumes too. Typically lights are used in tracking shots, but that didn't work here. For example, there were two SkyPanels installed on the buildings in the night scenes and the elevated dynamic range meant you could see them both, whereas in SDR their outline would have lacked definition and they would have appeared as a single light source. “With HDR, we went for a more diffuse light as there was a natural brightness.”, Matias Boucard explains.

It became an event, like with the fireworks scene.” The crew learnt all this on set, by carrying out different tests with the actors on location prior to the shoot.

This also meant the crew could test the look-and-feel of the dynamic range of HDR on different screen types. Some shots were viewed in 4K HDR at the end of each day on an OLED TV that Color had calibrated especially. We were able to see the dynamic range of the image for ourselves. For those who aren’t used to this type of image, it might be a shock to suddenly have HDR rendering sprung on you at post-production stage. This was avoided here as the team could view the images during the shoot itself.



A single grade for all screens

The grading took three weeks for all the deliverables (DCP, SDR and HDR). While the work was completed on an HDR reference monitor, it was decided that the rendering should be controlled from a standard TV that was calibrated and installed in the grading studio, finding the right image on that screen by being as close as possible to the viewing conditions of most viewers. "HDR changed my overall perception of contrast.", explains Matias Boucard, "Blacks look a lot deeper and on that screen they became a matterless black hole." Black is the same, but because white is brighter, there is a greater feeling of contrast. So we worked with low light curves for a softer rendering". The film used an ACES workflow, which initially threw up some surprising results - Matias Boucard admits he saw colours on screen he'd never

seen before. Yet it provided a single workspace shared by all post-production departments, so retaining the same rendering. Masters were then produced in Dolby Vision. "We were going to bring the film to the world in a variety of broadcast technologies.", Matias Boucard points out. "For example, Netflix streams on more than 1700 different screens. We wanted to preserve the integrity of the work as much as possible. And Dolby Vision met this need. The embedded metadata helped us keep the same image look-and-feel on every type of screen. As Chief Operator, it's like a dream come true." With Dolby Vision, we did a single grade which then adapted to the specific dynamic range of each screen. "Once the HDR grading is validated, the Dolby target & trims tool maps to the targets, SDR, Dolby

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Cinema, DCP, etc.", Jerome Brechet, DI Manager at Color, explains.

From a workflow perspective, you only add one step at the end; it doesn't disrupt everything. You don't go back to the beginning. And the Dolby toolbox contains many trim tools for easy retouches and adjustments. This also guarantees the highest quality for the SDR version. Finally, "I was able to reliably watch the film on a phone, an iPad, in 4K, HD, compressed or not.", Mathieu Caplanne continues.

Dolby Vision provides unprecedented consistency for all possible outputs, as well as an image that lives up to the creative vision of the team behind the film. It took some effort to get used to the workflow but it had real benefits - for subsequent versions as well as the growing number of HDR-compatible devices and screens.

