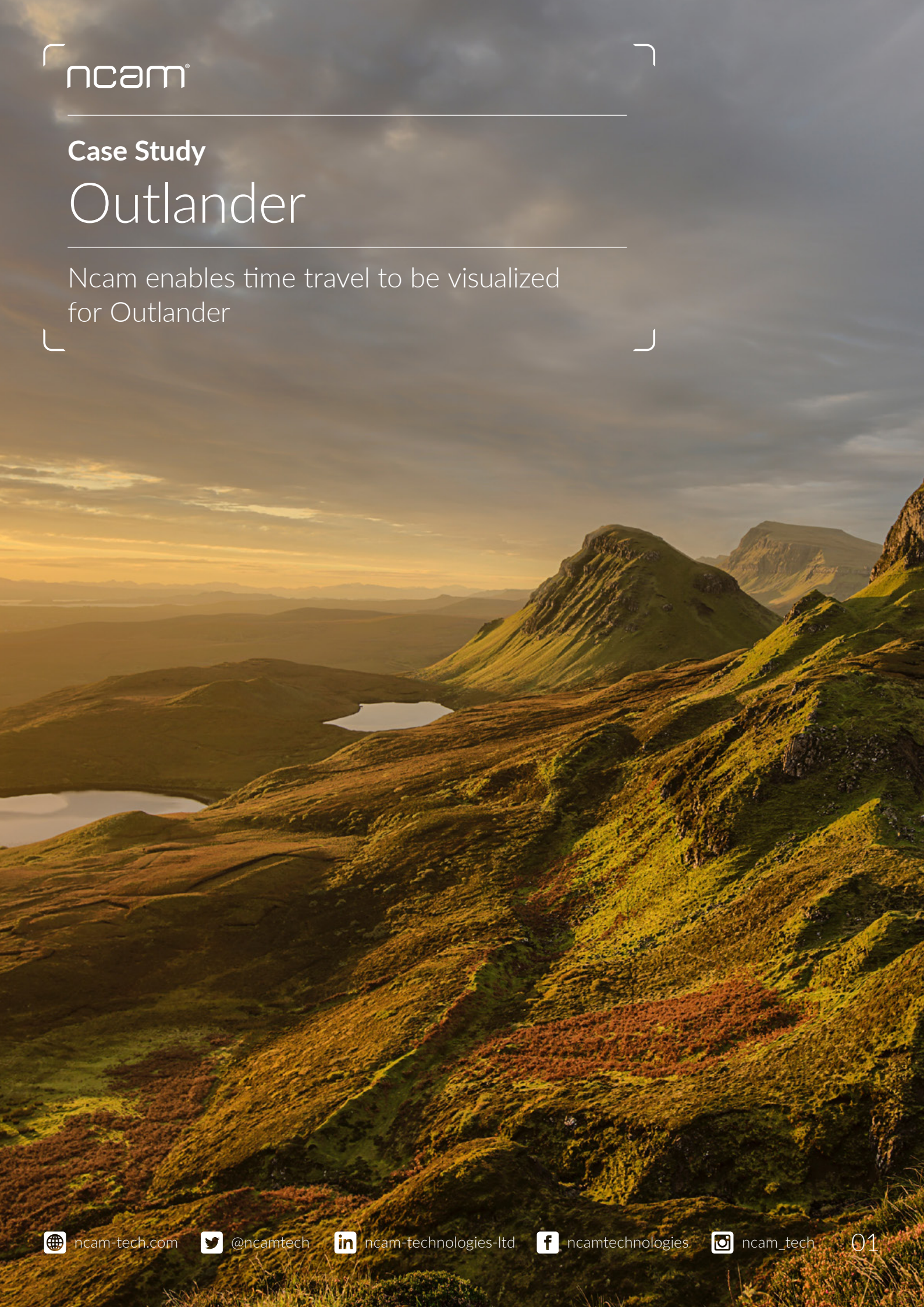

ncam

Case Study

Outlander

Ncam enables time travel to be visualized for Outlander

Outlander, the hit Starz/Sony series based on the popular Diana Gabaldon novels, begins in 1946 when former World War II nurse Claire Randall and her husband Frank are visiting Inverness, Scotland. There, Claire is transported back in time to the 18th century and must survive by falling in with a group of rebel Highlanders – including the warrior Jamie Fraser.

As well as its many award wins and nominations, Outlander also holds the accolade of being the first TV programme to benefit from Ncam's unique augmented reality platform for live, on-set pre-visualisation. Ncam recently spoke to camera and Steadicam operator Andrei Austin, who has worked on Outlander since the first season, and Richard Briscoe, VFX Supervisor on Outlander Seasons 2, 3 and 4.

With over 25 years of camera experience, Andrei makes a point of keeping up to date with new camera developments. He came across information about the Ncam system during his annual research period after shooting the first season of Outlander. Following that experience, Andrei was instrumental in introducing Ncam into the production workflow for the pre-visualisation of CG elements on key sequences in Seasons 2 and 3.

Since Outlander features real-world places from the 18th and 20th centuries that either don't exist any more or have been altered over time, VFX backgrounds were always going to be a given. However, the ability to view these virtual elements in real time alongside real elements was a new concept – and the ability to speed up the shoot, while providing on-set efficiencies for the production team, was very attractive.

For the one-day Palace of Versailles shoot, which actually took place on the production's green screen back lot in Scotland, an Ncam Reality bar was rigged onto Andrei's camera, an ARRI AMIRA. This in turn was rigged onto a Moviebird telescopic crane arm, a process that Andrei recalls as "very easy to rig, no more complex than mounting a production matte box."

He continues, "This set-up enabled us to get establishing shots of the comings and goings at the Palace of Versailles, including horse drawn carriage processions and pedestrians to give scale and context to the scenes taking place inside the Palace."

"The Ncam feed made things much easier for everyone on set - my Key Grip, for example, could swing out the Moviebird crane arm to precisely where I needed it simply by looking at his monitor and seeing the real and virtual elements together. The actors also understood the space better and were able to interact with the virtual elements as if they were present on set."

For Season 3, production moved to using a Sony F55, with Ncam Reality utilised on five wide shots across two episodes. At various stages during the shoot, the Ncam system was rigged both on a Moviebird and on a Steadicam for several key shots, including a street scene in the 18th century Royal Mile in Edinburgh, Scotland. This sequence forms a key part in the episode, as it establishes Claire, the co-lead character in the busy heart of Edinburgh's Royal Mile, including a important dialogue scene.

Using Ncam for the first time on Outlander Season 2, Richard Briscoe instantly saw the expected possibilities of the system surpassed in actual usage. "With some lessons learnt on Season 2 - which indeed was the system's first outing on a TV series production and its very first outdoors – we were encouraged by the ease of use and added flexibility, and by Season 3 we were able to more fully push the possibilities the system offered," he says. "On Season 3, it helped most in the on-the-day visualising. With the set being little more than a green screen 'corridor', or open-ended box with a cobbled section of road, it allowed the director to better (and faster) stage the action and position cameras, with an easy guide to, and understanding of, the environment the set would 'become'."

Richard continues, "It allowed me to better illustrate and steer the framings that would work best; for the methodology we would be using for later, adding in further crowd in the distance and for the limitations of the 3D Royal Mile environment that was already built. Additionally, the camera/grips/crane-ops could actually 'see' what they were framing for, what was 'virtually' around them in all directions, live, as the camera moved. The Chief Grip, Tim Critchell particularly commented that it was great as they didn't feel they were moving the arm 'blind' as they would otherwise be."

Further benefits of the Ncam system came into play for the production's art department and set decorators who were better able to understand and adjust the placement of props and set dressing; ensuring they looked and were placed correctly when, although the real world didn't move, the team changed set-up (and orientation of the visual 'Royal Mile') as if they were looking in a different direction along the street and/or on different parts of the street. Cast members also benefited by being able to understand the scope and scale of the environment they would eventually appear in.

Following the Royal Mile shoot, Andrei was amazed by the results. He adds:

> "What I love about the system is the ability to position the camera almost anywhere, and the 3D virtual volume stays in sync, allowing you to make shot decisions on the day without worrying about running out of virtual background."

"Hybrid virtual production has had a big impact on me since I can foresee a much deeper immersion into the virtual world of film-making," he says. "DOPs will now be able to carry their lighting decisions into the virtual element rather than someone else down the line deciding on the 'look'. Camera teams can be more expressive and inventive with shots, since they can 'see' what the final frame will look like. Directors can perform a virtual tech scout within the virtual CG volume and make decisions before getting on the set. It's a very exciting technology."

Having used the Ncam system several times, Andrei is convinced by its benefits – and intrigued by future possibilities.

Richard is also an Ncam convert. "The possibilities are enormous – depending of course on the production's appetite for the cost vs benefits and enough time up-front to build necessary 3D assets. On Outlander Season 2, some of the production side were initially slightly cautious on a cost basis, and whether it would slow down the shoot, while the exec-producer/writer/director was immediately very sold on it and wanted to use it more. However, once seen in action, everyone was very impressed and excited by possibilities. So by Season 3, it was, for the right scene, a 'no-brainer'."

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