



Revolutionizing Cinematic Production from ANY Location with Versatile In-Vehicle Connectivity

Dejero and First Mile Technologies drive down costs and accelerate efficiencies for vehicle camera specialists KALA

In partnership with Dejero, First Mile Technologies and camera car specialists, KALA, are changing the face of cinematic production sets in challenging outdoor environments with a unique proposition: a full-service production vehicle that can streamline workflows while shooting dynamic content for film, television, and commercials.

Overview

Capturing and producing high-quality dynamic and fast-paced vehicle footage creates some of the most testing logistical challenges that film, television, and commercial production teams contend with.

Vehicle-to-vehicle shoots, in particular, are highly specialized and have traditionally involved at least three vehicles; one as the subject for the content, another to capture the content, and the last one acts as a chase vehicle to ensure a line-of-sight video signal for the creatives to direct the action.

Factor in working in remote locations or challenging terrain, keeping multiple stakeholders informed, transporting production personnel – not to mention hiring some of the best drivers in the business to keep all the support vehicles out of shot – and the logistical headaches and costs can quickly start to spiral.

About KALA

KALA are professionals in the art of storytelling with moving cameras. As a dedicated team of specialists, they've spent more than 20 years searching for the best ways to capture high-end content for a wide range of clients in television, film, and commercials. Their passion for dynamic camera movement has enabled them to design a solution which adds incredible value to any project.

www.kala.ltd

KALA

Production efficiencies are key to managing costs and logistics in these fast-paced environments. At the same time, reliable and easy connectivity is vital to keeping everybody in the loop, whether on set or working remotely.

New streamlined communication workflows, using unmatched connectivity solutions that enable real-time remote collaboration, significantly save the time and cost a production would typically require to coordinate multiple moving vehicles on set. They can entirely remove the requirement for a temporary local base camp or video village that would usually host directors, producers, and commercial teams.

Challenge

KALA, a production and dynamic camera movement company based in Canada, is all too aware of the challenges of shooting moving vehicles.

“For any of these types of shoots, whether a vehicle commercial or stunt scene, the camera vehicle is packed,” says KALA co-founder and cinematographer Vinit Borrison. “It has a remote-control crane arm that one person is assigned to, a camera operator assigned to move the camera on that arm, a focus puller in the rear of the vehicle to ensure the pictures are sharp and a driver who responds to direction as to how and where to drive the vehicle.”

Capturing these high-speed scenes requires a chase vehicle to carry the creative team to ensure they generate the right shots. That vehicle must be close enough to receive line-of-sight video transmission and coordinated enough to stay out of sight.

“Maintaining formation and avoiding being in the shot takes a lot of skill,” explains Brandon Cooper, president, film and new media at First Mile Technologies. “A key issue is that live video transmission has traditionally been short range, which is why multiple vehicles have been required to shoot motion picture projects.”

In addition, outdoor location work has typically required other stakeholders to be on site to assess shots for creative input. For commercial work, collaboration is key, with stakeholders from the agency and the client needing editorial input as well as the production crew. If a shoot takes place on a mountainside, for example – or another location where connectivity is limited – there is every possibility that the crew may return to a base camp with only a few clips for review, which hinders off-set creatives and slows the collaboration process.



Cinematographer and co-founder of KALA, Vinit Borrison, worked with First Mile Technologies to create the ground-breaking production vehicle.

“That’s a big deal because we’re usually having to drive some distance from base camps to be able to shoot remote scenery, and often adding environmental effects like rain,” says Borrison. “Those things aren’t easy to reset for another shot quickly, so if the creatives only see footage after returning to basecamp we have to reset a lot of elements to capture another take.”

Most productions require a “video village” and a data dumping station, which presents additional challenges in reviewing footage to the wider creative team. Besides just reviewing footage on set, often we are copying and backing up large amounts of raw data from the camera. Backups are generally done on site, however with the resilient connectivity provided by Dejero, KALA can transfer proxy-based files, as they shoot, to the cloud. Raw content is still delivered on physical hard drives, but being able to send proxies over the air eliminates significant delays whenever distance from the city is a factor.

“With Dejero onboard, our vehicle is a turnkey solution. Given the type of work we do, and the tight deadlines, the expectation is that everything just works out of the box.”

Vinit Borrison, co-founder and cinematographer, KALA



A Dejero EnGo mobile transmitter and a GateWay network aggregation device provide resilient mobile broadband internet access from any set location in nomadic production environments.

Solution

To streamline these processes, KALA worked with First Mile Technologies to integrate Dejero solutions directly into its ground-breaking cinematic production vehicle. It ultimately combines camera systems, connectivity, and creative decision-making functionalities into one. KALA’s vision was to streamline the entire production and post-production processes and facilitate remote collaboration in real-time.

Since many of KALA’s shoots are in remote locations, limited network coverage is not uncommon, so KALA needed a solution that ensured reliable and uninterrupted connectivity no matter the environment.

“With Dejero onboard, our vehicle is a turnkey solution. Given the type of work we do, and the tight deadlines, the expectation is that everything just works out of the box,” says Borrison.

Its new state-of-the-art camera vehicle employs Dejero EnGo mobile transmitters that combine multiple IP networks, including cellular and/or satellite, to achieve reliable connectivity for real-time remote collaboration from virtually anywhere. KALA can use the EnGo wirelessly in a backpack or attach it to external antennas to further boost reception further.

“For KALA, we installed an antenna on the roof of the vehicle to further increase network diversity for the EnGo, and because the EnGo can be removed from the truck it can be used in other locations should the production call for it,” says Cooper. “We have worked in many connectivity ‘dead zones’ but we’ve always had success with the Dejero configuration.”

Adhering to H.264 AVC and H.265 HEVC further expands bandwidth and helps achieve a glass-to-glass sub second latency over a bonded cellular connection.

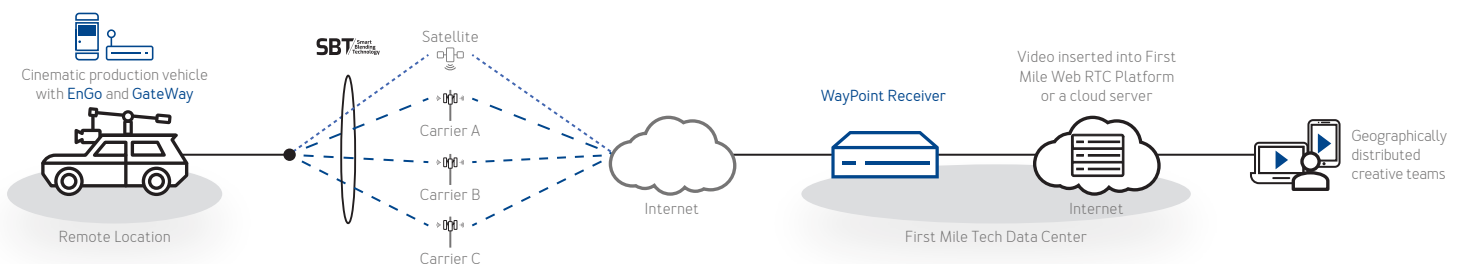
From wireless remote-controlled cameras positioned on cranes and arms in moving vehicles and other set locations, the live camera feeds are transported in real-time to a Dejero WayPoint receiver, a cloud server or via the First Mile Web RTC platform, and then on to geographically distributed creative teams.

First Mile also integrated a Dejero GateWay network aggregation device for resilient mobile broadband internet access even when the KALA vehicle is on the move. It enables fast video and data transfers with sub-second latency. Like EnGo, the ruggedized GateWay uses Dejero’s award-winning *Smart Blending Technology™*, which aggregates all available IP networks and dynamically manages fluctuating bandwidth, packet loss, and latency differences of individual connections in real-time.

This technology creates a single virtual ‘network of networks’ to provide access to a far greater coverage area than any single provider can deliver. What’s more, if any single connection becomes congested, the system can automatically reroute packets in real-time across other connection paths.



The live feeds are transmitted to geographically distributed creative teams from wireless remote controlled cameras positioned on cranes and arms in moving vehicles and other set locations.



The KALA vehicle uses Dejero EnGo mobile transmitters to send live feeds to geographically distributed creative teams from wireless remote controlled cameras positioned on cranes and arms in moving vehicles and other set locations. Transported in real-time to a Dejero WayPoint receiver, a cloud server or via First Mile Web RTC platform; the live video stream can then be viewed in a simple browser or through secure video screening applications by remote creative teams and displayed simultaneously on five monitors within the vehicle for the production crew on location. Dejero GateWay network aggregation device provides resilient mobile broadband internet access from any location for fast video and data transfers with sub-second latency.

“Having something which can expand signal coverage using multiple carriers across multiple cell towers helps us enormously,” adds Borrison. “Sometimes we just don’t know where we’re going to end up or what conditions we’re going to face, and having another set of eyes on the set, in real time – whether that’s an editor or the client tuning in remotely – helps us to fix any mistakes on the fly as opposed to after the fact where we would have to schedule a reshoot.”

“It allows us to be smarter and more efficient when we service a job.”

“Live transmission over distance is a game changer for us. It’s not just about the connectivity - it’s an aid to creativity.”

Vinit Borrison, co-founder and cinematographer, KALA



Dejero's *Smart Blending Technology* has enabled Borrison to overcome network connectivity challenges in the remotest and harshest of environments.

Results

Dejero has enabled KALA to maximize the cost efficiency of every single shoot by making the most of their time on set.

“Live transmission over distance is a game changer for us,” says Borrison. “It’s not just about the connectivity - it’s an aid to creativity.”

The ability to send live footage instantaneously to any browser means that anyone can give and receive real-time feedback wherever in the world they are. Creatives can pick up streams on site via the First Mile Frame platform, or they can be accessed in the cloud directly from the vehicle, via Dejero’s WayPoint receiver.

It means the wider creative team can see what’s going on at any given moment and give real-time feedback. There is no longer a requirement to move people around or coordinate multiple vehicles or physically move files on a hard drive to the creative hub.

“People having to crowd around a few monitors on set has been superseded by a virtual video village because we can now connect our client’s creatives and stakeholders from the comfort of their homes or studios,” continues Borrison. “It means that everyone has an optimal view of what is being filmed at that moment so faster, and more considered, creative decisions can be made, which enhances overall production value.”

The Dejero solution also provides additional flexibility: “The GateWay was key for two reasons,” adds Cooper. “The vehicle isn’t just used for transmitting; it can roll up on any set and we can break out wireless mesh networks to create large-scale connectivity. It becomes an ultra-reliable rolling hotspot.”

KALA has already deployed the production vehicle on multiple car commercials, including Volkswagen, Nissan, Toyota, Lexus, and Mercedes.

Integrating Dejero connectivity into a purpose-built vehicle can increase productions efficiency and capability in numerous environments and open up a whole new world of possibilities in the great outdoors.

“In the past an entire shoot could come to a standstill because you can’t get approval from the client or you’ve lost comms with the director. You never get that time back. Our job is to provide a solution, and that’s why the Dejero equipment is fully integrated into our vehicle,” concludes Borrison.



Ground-breaking cinematic production vehicle handles multiple functions on fast moving commercial sets and streamlines creative workflows with Dejero EnGo and GateWay.

Content is king. Connectivity is kingmaker. We’re here to help you acquire, produce, and distribute your content with critical connectivity.

Start the conversation today

connect@dejero.com | +1 519 772 4824 | dejero.com

Dejero

Copyright © 2022 Dejero Labs Inc. Dejero, Smart Blending Technology, and the Smart Blending Technology logo are trademarks or registered trademarks of Dejero Labs Inc. All other trademarks are the property of their respective owners. Design, features, and specifications are subject to change without notice. 09/2022