

### Going the Distance for the London Marathon

#### Broadcast RF Relies on Vislink Equipment for Live Race Coverage

##### The Scenario

More than 38,000 participants crossed the starting line of the 2015 London Marathon, the largest crowd in the event's 35-year history. The gruelling 26.2 mile race from Blackheath to The Mall, brings together athletes of all types, all sharing a single goal: to cross the finish line.

##### The Challenge

Providing seamless coverage of a long distance event, such as a marathon, presents many challenges – including transmitting from the entire length of the course, gaps in coverage due to obstructions such as bridges and overhanging trees, and ensuring high-quality video from all assets.

In order to provide RF coverage of a long distance event, Broadcast RF utilizes multiple ground and aerial assets to capture live video, including five motorcycles each with pilot and cameraman, two helicopters, six OB vans, one airplane and a studio control site. It is extremely important for all members of the crew to use reliable, compatible equipment.

##### The Solution

For the second year in a row, Broadcast RF was on scene with Vislink equipment to provide continuous live coverage of the entire marathon course.

##### Motorcycles

Media Motos provides the motorcycles and two-man camera crews for the London Marathon. There are five motorcycles deployed along the route, each with a pilot, cameraman, and two pelican cases, one consisting of the L1700 wireless transmitter, power amplifier and GPS tracking system, and a second featuring a custom-built onboard battery.

Three of the bikes have rear-facing cameramen, and are positioned just in front of the lead wheelchair, male and female runner. The other two bikes have forward-facing cameraman, which move along the route capturing moments of interest.

Broadcast RF chose the L1700 because it is a lightweight, compact unit, that doesn't require heavy cumbersome equipment and cables. Vislink's proprietary deep interleaving error correction is designed specifically to handle interruptions to the link path such as bridges and trees. The MPEG4/H.264 video encoding provides an excellent high-quality picture, despite limited RF bandwidth.

##### Air Assets

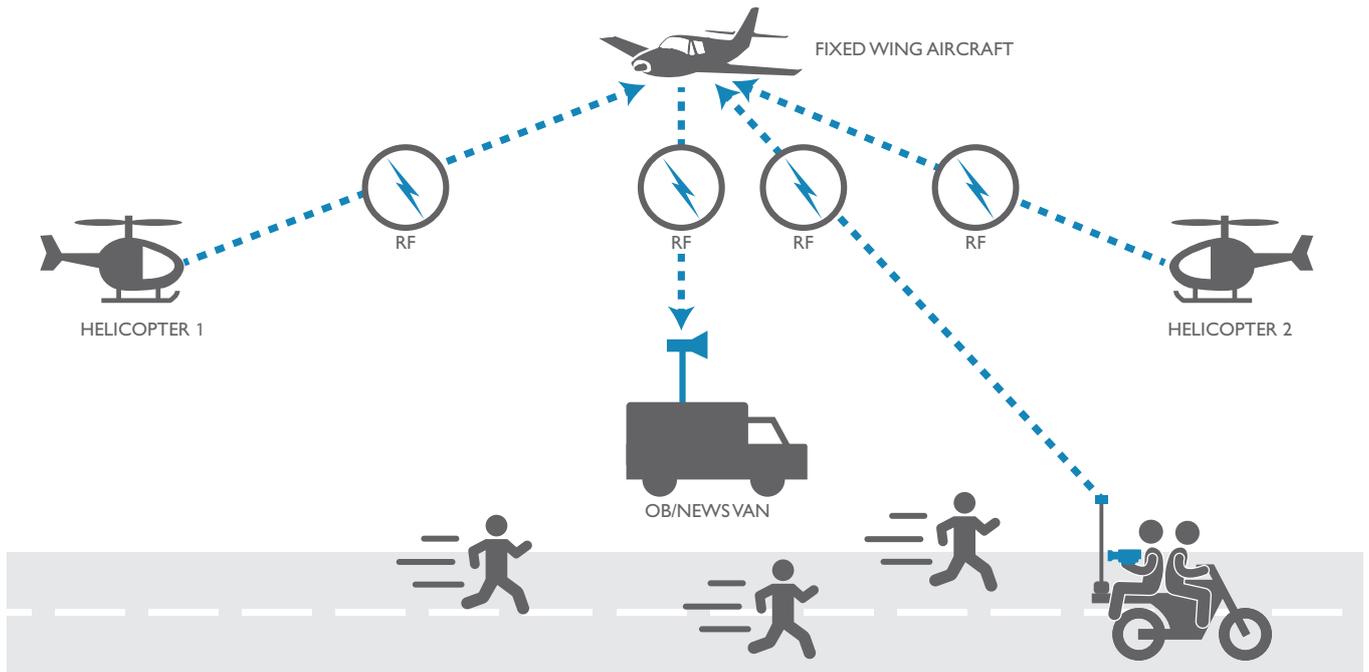
Two helicopter cameras provide aerial coverage of the event. All video feeds transmit to a fixed wing aircraft circling at 22,000 feet. Vislink equipment embeds the GPS unit data within the video link, providing the plane with the bike's exact position on the course. This allows the steerable antennas to track the bikes and ensures signal reception. Using the plane gives Broadcast RF the flexibility to split mobile RF assets over the length of the course, including the helicopters and motorcycles.





## Master OB Compound

Two downlinks deliver the video from the aircraft at 3GHz via Vislink's proprietary 24MHz wide LMST modulation scheme to a customized diversity receive system at the master OB TV compound. From there, live coverage is broadcast to millions of viewers worldwide.



## Conclusion

Broadcast RF has worked with Vislink for many years, delivering reliable, low-latency live coverage of events throughout Europe and the US. They utilize Vislink products almost every weekend for a multitude of events, including stadium and long-distance sports, where the flexibility in system setup allows Broadcast RF to provide the best possible picture from every angle.

"We are only as good as our last job – in this industry, it's all about performance. You have to deliver at a very high standard or you won't be asked back. Customers rely on us to suggest the best equipment for the job, and Vislink provides the right solutions, whether it's a concert, rugby game, golf match, or the London Marathon. Vislink equipment allows us to configure the system in the manner best suited to cover the event, and provides us the flexibility to deliver the best possible results."

Chris Brandrick  
SALES DIRECTOR, BROADCAST RF