Case study

Elevating race day with 5G

How a 5G private mobile network from Bell turned spectators into racers

Ultra-low latency is essential to realizing the potential of innovations like autonomous vehicles, telerobotics and augmented/virtual reality. By offering 5G speeds and capacity that never needs to rely on shared public traffic, a private mobile network offers mission-critical performance.

As an event sponsor for the Formula 1™ Canadian Grand Prix in Montreal, Bell wanted to elevate the experience for fans watching the race at home. The result: a miniature racetrack featuring remote-controlled cars operated by participants across Canada. Bell's powerful **5G private mobile network** ensured a high-quality experience, even though participants were located across the country — demonstrating the potential of this technology for enterprise applications such as robots, autonomous vehicles, and connected smart devices controlled from remote locations.

How a private mobile network empowers enterprises

High speeds, low latency
Lightning-fast 5G enables the low latency required to control drones and other devices over vast distances. Bell's private mobile network in Montreal allowed AI to track the miniature racecars in real-time so that the participants could control them from coast to coast.

Enterprise-grade reliability
Advanced 5G connectivity allows real-time communications and seamless handoffs for automated systems, vehicles, and connected machines. In Montreal, the private network ensured that live attendees using public 5G wouldn't affect the miniature version of the race.

Simple scalability
A private mobile network can scale effortlessly to support a high volume of devices and connections. At the Formula 1™ Canadian Grand Prix event, the private network allowed for precise customization tailored to support numerous devices and connections.

Additional business benefits of private wireless connectivity

✓ **Agile deployment**
Deploy devices and reconfigure them easily, even in remote locations. Get visibility into the state of your operations, assets, and equipment wherever they are with real-time monitoring.

✓ **Robust security**
Private mobile networks offer a level of security essential for data security and uninterrupted operations.

Ground breaking technologies that enabled the remote-control experience

In addition to the 5G private mobile network, the miniature racecars were also powered by:

Multi-access edge computing (MEC)

MEC brought cloud computing power right to the edge of the network, enabling low latency applications and enhancing the overall experience. The server efficiently relayed traffic between live video sources and remote participants for a smooth, real-time experience. MEC also allowed the AI to understand and instantly respond to what was happening on the miniature racetrack.

Artificial intelligence (AI)

The experience included an AI system used to oversee the remote-controlled race cars on the miniature track, including the ability to take control of the cars, if necessary. To train the AI on a tight timeline, the Bell team built digital twins of the cars and track, then used that virtual world to emulate various real-world scenarios.

Why choose Bell for private mobile networks

Canada's best national network[1]
Power your IoT solutions on the LTE and 5G networks that outperform all other national wireless carriers for combined data, reliability, and network coverage.

Licensed spectrum
Bell's spectrum assets support urban and rural deployments, with advanced spectrum-sharing features for reliable, interference-free scalability.

Leading experience
Our experts can help you design, deploy and implement a private network tailored to your needs, backed by extensive experience with networks across the country.

Security by design
Our team of more than 400 certified security professionals can help you keep your business network safe.

Request a call back and speak to a Bell representative to learn more.

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