

FACTSHEET

Artificial Intelligence (AI) in Olympic Broadcasting

02 February 2026

1. Overview

Artificial Intelligence (AI) is transforming Olympic sports broadcasting, and Olympic Broadcasting Services (OBS) has been at the forefront of this evolution. Through sustained innovation alongside Olympic TOP partners, OBS uses AI to enhance both the viewing experience and efficiency in broadcast workflows. While AI helps optimise content production and analysis, the essence of Olympic storytelling remains profoundly human.

OBS began experimenting with AI at the Olympic Winter Games PyeongChang 2018, gradually expanding its capabilities across subsequent Games. Paris 2024 marked a significant milestone, with mature AI solutions enhancing live coverage and streamlining production. Building on this momentum, OBS is further expanding and refining the use of AI for Milano Cortina 2026, while continuing to shape its role as a powerful tool for innovation and storytelling looking ahead to Los Angeles 2028.

2. OBS AI Guiding Principles

OBS's approach to AI is guided by the **Three E's: Enablement, Engagement, and Efficiency**, reflecting its impact on live sports coverage.

Enablement: AI enhances content capture, processing, and presentation. By integrating real-time data with video, it enriches narratives and deeper analysis, refining existing footage rather than generating new content.

Engagement: AI-driven tools like real-time 360° and stroboscopic replays, tracking technologies, and data visualisations bring fans closer to the action, offering new perspectives and deeper insight into athlete performances.

Efficiency: With vast amounts of Olympic content produced during the Games, AI streamlines workflows by automating time-consuming tasks such as logging, transcription, and highlights creation, enabling quick delivery of key moments and at scale.

By applying the Three E's, OBS is reshaping how the Olympic Games are captured, produced, and shared across platforms with audiences worldwide.

3. AI Enhancing the Viewing Experience

OBS employs advanced AI technologies to enhance how Olympic performances are captured, analysed, and experienced by audiences. From immersive replay systems that reveal biomechanical detail, to AI-powered tracking and sport specific graphics that turn complex data into intuitive visual stories, these innovations help viewers better understand speed, technique, positioning, and strategy in real time.

Stroboscopic Replay

Uses AI to break down fast movements into clear, sequential visual positions, revealing biomechanical details that are difficult to see at full speed.

Helps viewers understand technique, precision, and execution in high-speed sports.

Examples:

- **Previous Games:**
 - Beijing 2022: Big Air disciplines
 - Paris 2024 (with Omega): Artistic Gymnastics, Athletics and Diving
- **Milano Cortina 2026** (with Alibaba and Omega):
 - 12 systems covering 15 sports/disciplines, including Alpine Skiing, Sliding Sports, Luge, Figure Skating, Freestyle Skiing, Snowboard, Ski Jumping and Speed Skating

Real-Time 360° Replay ^{NEW}

Uses AI to process footage from multiple cameras positioned around the field of play and reconstruct key moments in three dimensions, combining frame-freeze slow-motion 360° replays with stroboscopic visualisation.

Provides immersive replays that reveal athlete technique and movement from every angle, even during live coverage.

Note: Previously referred to as a multi-camera replay system, earlier versions focused on the 360° effect only. Milano Cortina 2026 introduces the combined 360° and stroboscopic capability.

Examples:

- **Previous Games**
 - Tokyo 2020: 9 sports/disciplines
 - Beijing: 10 sports/disciplines
 - Paris 2024: 21 sports/disciplines
- **Milano Cortina 2026** (with Alibaba):
 - 17 systems covering 17 sports/disciplines including Freestyle Skiing, Snowboard, Ice Hockey, Short Track Speed Skating, Sliding Sports, Figure Skating, Ski Jumping and Speed Skating

Sensor-Based Tracking

Tracks athletes' speed, position, and performance gaps in real time, using sensor and timing data enhanced by AI.

Helps viewers clearly understand race dynamics and performance differences through intuitive onscreen and replay graphics.

Examples:

- **Previous Games:**
 - Tokyo 2020, Paris 2024 (with Omega): Virtual race analysis in athletics sprint events
- **Milano Cortina 2026** (with Omega):
 - Virtual race analysis in Speed Skating ^{NEW}

Image-Based Tracking

Uses AI-driven computer vision to track athletes or equipment directly from broadcast images, without physical sensors.

Makes it easier for audiences to follow the action and understand positioning and race flow.

Examples:

- **Previous Games:**
 - Tokyo 2020, Paris 2024 (with Omega): Athletics (Marathon, Race Walks), Cycling (Road, Mountain Bike), Marathon Swimming, Triathlon, Canoe Sprint, Rowing, Sailing
 - Beijing 2022: Biathlon, Cross-Country Skiing
- **Milano Cortina 2026** (with Omega):
 - Cross-Country Skiing, Ski Mountaineering ^{NEW}
 - Figure Skating ^{NEW}

Motion Tracking

Visualises full 3D trajectories of athletes or objects, including speed, height, and direction.

Reveals techniques, precision, and performance details that are invisible to the naked eye.

Examples:

- **Previous Games:**
 - Tokyo 2020: Golf ball trajectory
 - Paris 2024 (with Omega): Diving, Archery, Table Tennis, Golf, Swimming, Volleyball
- **Milano Cortina 2026:**
 - Curling ^{NEW}: real-time stone tracking
 - Sliding sports (with Omega) ^{NEW}: real-time race position visualisations using colour-coded graphics

Biometric Visualisations

Displays selected physiological data to provide insight into athletes' emotional and physical intensity.

Brings audiences closer to key moments by revealing performance under pressure.

Examples:

- **Tokyo 2020 & Paris 2024:**
 - Archery: live heart-rate visualisation using contactless, AI-powered vital sensing (used only with athlete consent)

AI-Enabled Personalisation – Biathlon ^{NEW}

For Milano Cortina 2026, OBS introduces an AI-powered shooting range camera system that allows Media Rights-Holders to select live feeds from lanes featuring their national athletes. By linking live video with real-time shooting data, the system enables onscreen graphics showing hits, misses, and shooting times, expanding storytelling beyond top performers and increasing editorial flexibility.

AI Transcription & Translation – Alpine Skiing ^{NEW}

For Milano Cortina 2026, for the first time in Alpine skiing at the Olympic Winter Games, OBS will make the Team Radio communications between athletes and coaches accessible to viewers. AI-powered speech recognition and real-time translation transcribe radio exchanges and translate them into English while preserving the original audio in the athlete's or team's native language. The translated content is integrated into the broadcast before or after a run, offering unique insight into real-time strategy, conditions, and emotions.

4. AI Optimising Broadcast Operations & Workflows

In parallel with on-screen innovation, OBS uses AI extensively behind the scenes to streamline production workflows, improve efficiency, and support broadcasters and editorial teams.

Automatic Media Description Platform AMD ^{NEW}

Uses AI to analyse live broadcast feeds and automatically generates structured metadata, including shot segmentation, draft descriptions, and searchable keywords.

This transforms live content into time-coded, searchable assets, enabling faster logging, research and story development across editorial teams.

Introduction & use:

- **Milano Cortina 2026:** trial phase
- TOP partner: Alibaba

AI Transcription, Summary & Shot List Generation ^{NEW}

OBS produces official highlight videos for every competition session, which are made available to Media Rights-Holders (MRHs) via Content+. These highlights include English-language commentary.

To support MRHs in localising and customising these highlights for their audiences, OBS has developed AI-powered tools that generate additional editorial metadata. Building on outputs from the AMD platform, AI creates a time-coded transcription of the commentary used in each highlight, enabling subtitle creation. It also generates a concise textual summary, which serves as a starting point for MRHs to create their own voice-overs in their local language. In addition, AI automatically produces a shot list describing each shot in the highlight video with corresponding timecodes.

This metadata is delivered alongside the OBS-produced highlight, significantly accelerating localisation, editorial adaptation, and distribution by MRHs.

Introduction & use:

- Milano Cortina 2026

Automatic Voice-Over Translations (Post-Competition Interviews) ^{NEW}

For post-competition mixed-zone interviews that are only conducted in an athlete's native language, OBS uses an AI-powered voice-over translation system to generate English-language voice-over versions.

This solution accelerates delivery to MRHs by improving the current voice-over workflows. AI generated voice-overs do not clone nor impersonate any featured individuals' voices and are always reviewed and validated by human operators before distribution.

Introduction & use:

- Milano Cortina 2026

Transcription & Subtitles for Commentary and Interviews

AI-powered speech-to-text technology converts OBS commentary and selected interviews into English-language transcripts and subtitles. This automated process supports editorial workflows at scale, enabling efficient handling of thousands of hours of content without manual transcription and subtitle creation.

Introduction & use

- Introduction: Tokyo 2020 (only transcription)
- Gangwon 2024: introduction of subtitles
- Continued for: Paris 2024, Milano Cortina 2026

Rough Cut Assistant (RCA) ^{NEW}

Developed in-house by OBS, the RCA builds on AI-generated metadata to automatically select and sequence video clips into a draft edit. By delivering a ready-made rough cut directly on the

editing timeline, it significantly reduces manual assembly time and allows editors to focus on creative refinement and storytelling.

Introduction & use:

- Introduction: Milano Cortina 2026

Automatic Highlights Generation

Separate from OBS-produced highlights, OBS offers an AI-powered highlights creation service that allow MRHs to generate their own highlights from scratch. The tool enables MRHs to automatically produces highlights based on configurable editorial parameters such as sport, athlete, nationality, duration, or competition phase, enabling fast, scalable highlight creation for both broadcast and digital platforms, including vertical video formats.

Introduction & use:

- Proof of concept: Gangwon 2024
- Launched: Paris 2024 (14 sports/disciplines; 100,000+ highlights created)
- Continued and made available for all sports at: Milano Cortina 2026

5. Ethical and Responsible Use of AI

OBS's use of AI aligns with the International Olympic Committee's [Olympic AI Agenda](#), launched in April 2024, which sets out principles of fairness, accuracy, transparency, and human oversight in the application of AI across the Olympic Movement.

In line with these principles, OBS applies AI as an enabling technology to enhance production capabilities, efficiency, and storytelling, while maintaining full editorial control and human decision-making at every stage. AI supports, not replaces, the creativity, judgement, and expertise of broadcast professionals, ensuring that Olympic coverage continues to reflect the values, emotion, and authenticity of the Games.