Viz Arena™ enables broadcasters to place virtual 3D graphics into their live coverage of a sports event.

**Advantages and Benefits**
- Image-based camera tracking for upstream or downstream enhancements.
- Versatile solution with unlimited possibilities to enhance a live program.
- Flexibility to include third-party sports data.
- Replay effects using video servers or internal disk recorder.

**Key Features**
- Real-time graphics for sports
- Instant replay effects
- Data-driven graphics
- Tied-to-field graphics
- Available for every sport
- Downstream production workflow
- Virtual ads insertion
- Image-based camera tracking
- Unlimited enhancement possibilities

**Virtual 3D graphics and enhancements**
Capitalize on your sports content through targeted, multi-regional virtual advertising with Viz Arena. Visualize the dynamics of the game whether for reviewing critical referee decisions, measuring the athlete’s performance or to visually assist the viewers to focus on the key action of the game. Viz Arena is the perfect solution to superimpose any kind of virtual 3D graphics over the live coverage of every sporting event.

**Image-based tracking**
For select sports, Viz Arena incorporates an image-based camera tracking engine, as applied in Vizrt’s flagship sports analysis system Viz Libero. Based on state-of-the-art image processing technology, Viz Arena can track cameras in real-time based on a clean video feed. This makes it possible to apply graphics to the field in the studio using only a single satellite feed without the need of mechanical tracking heads. The tracking engine recognizes the pattern of the pitch, thereby creating a camera calibration model. Viz Arena then applies a sophisticated tracking algorithm relying on image features. Mechanical tracking with calibration heads can be used for any sport.
Data-driven graphics & instant replays

The flexibility of Viz Arena allows integration with any type of sports data provider, like Stats or Opta, for live player tracking or statistical data. Visualize the data tied-to-field or above-field and attach graphics to the appropriate player or position on the field. For superimposing graphics onto unknown terrains such as in golf, Viz Arena also integrates with laser measurement devices. Instant replay effects are achieved easily using the tight integration with EVS replay servers.

Advertisement control

Viz Arena allows you to place your sponsor logos manually on the field, or to have a permanent position during the complete game. This feature is very useful in a downstream workflow to insert virtual signage on or around the playing field with an automatic image-cut detection and an internal signal buffer for quality control.

For every sport

All elements of Viz Arena are extremely versatile. Virtual graphics can be applied to every sport event and under any condition. Whether the graphics need to be displayed on a flat soccer field, on a race course or on an uneven golf green, the calibration process and the handling of the graphics will be identical. This guarantees a consistent workflow, easy setup, and minimal training for the operators. Viz Arena relies on a compact and mobile two-box hardware solution.

Viz Libero - Sports analysis

As sports games become faster and more complex, analysis tools are needed in order to break down the key plays and visualize the tactics behind it. Viz Libero combines realistic looking 3D replays from the perfect perspective and advanced virtual graphics for sports broadcasts. TV viewers will get unprecedented insight into controversial or tactically interesting sports scenes.

Visit vizrt.com for more information about Viz Arena