



PIERO Broadcast

World-leading sports
graphics analysis system

ROSS



PIERO Broadcast is a real-time 3D sportsgraphics and analysis system from Ross. Created for broadcasters, PIERO engages audiences by using cutting-edge graphics and tracking technology to tell a clearer, more compelling story.

Advanced Analysis

PIERO is built on a proprietary line and texture tracking algorithm that was co-developed with the BBC's Research and Development department. The technology creates a seamless blend of graphics and video which maintains perspective and keeps graphics tied to the game as the camera moves.

Wide Feature Set

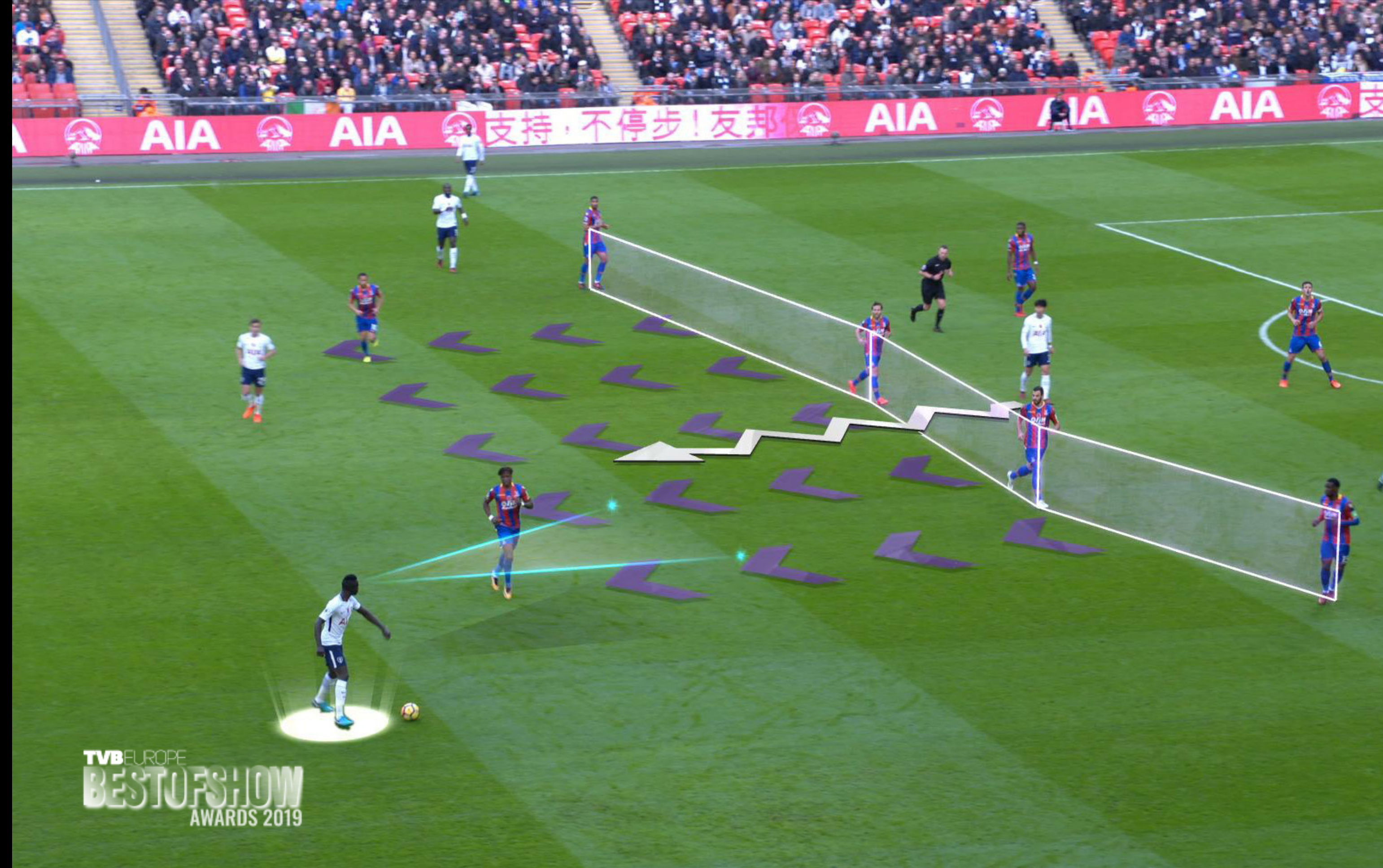
PIERO's wide feature set is compatible with over 20 different sports. You can mark players, track runs, add speed and distance, show movement, and much more. PIERO allows you to engage your audience by creatively adding graphics and providing new, interesting views of the action.

New Angles & Transitions

PIERO's virtual stadium feature can create 3D replays that show plays from new, previously unseen angles. The Multicam effect can smoothly transition from one camera to another, and both modes can be used to show data feed visualizations through a touchscreen.

Fast and Easy to use

PIERO is fast – clip creation time varies between just seconds for simple clips up to 15 minutes for the most complex thanks to PIERO's rapid workflow. You can source external video servers from a Mira+ chassis or work from pre-recorded video files.



Fits your workflow

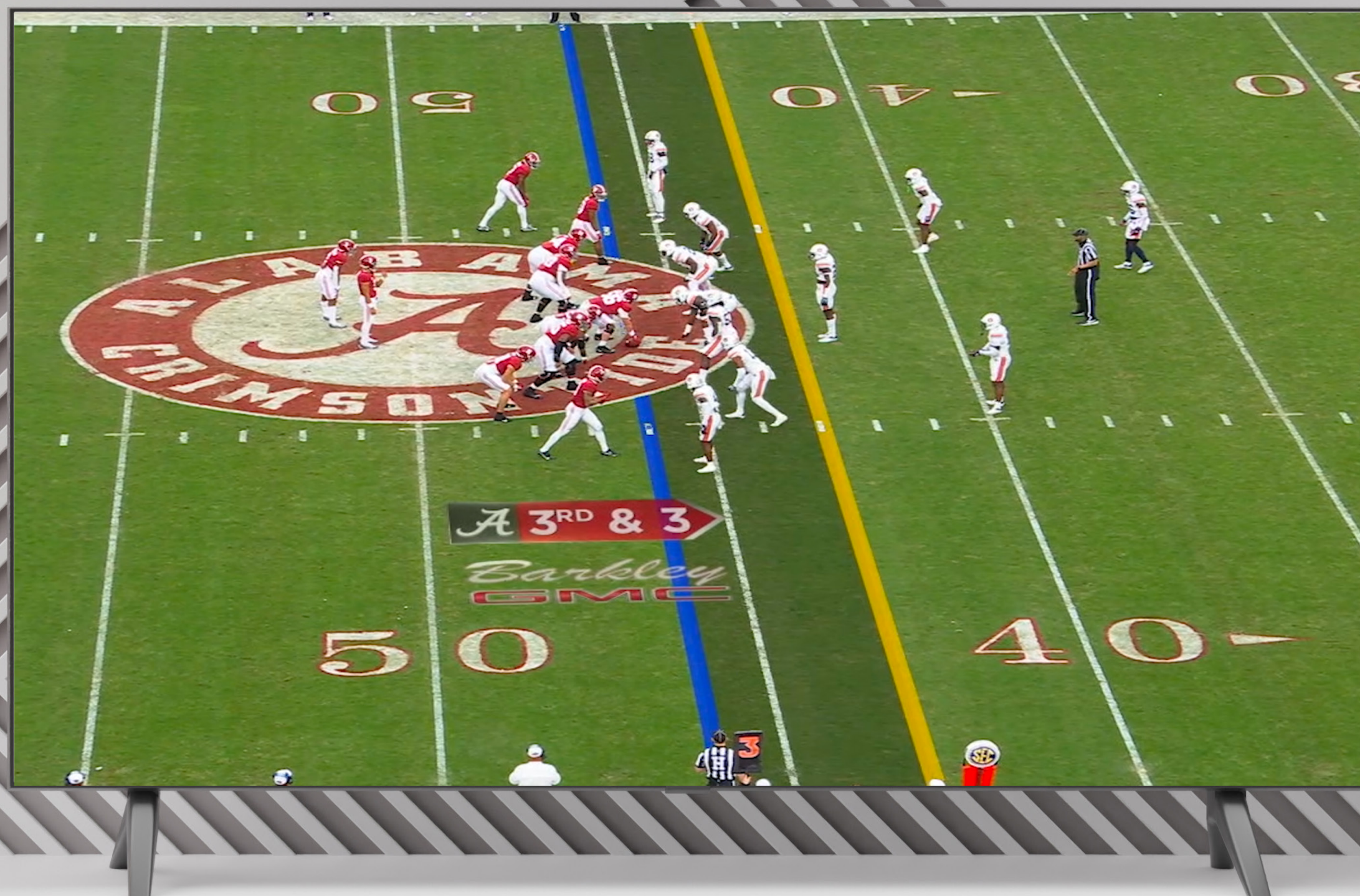
PIERO provides a wide range of modes to support all types of workflows. From in-depth discussion to quick annotation, PIERO makes analysis easy. For highlights, the system can create them during the game and then air them at half-time, after the game, or later.

Better commentary

PIERO's wide range of effects helps producers, presenters, and commentators analyze the incidents on the sports field more effectively. The system is also able to ingest and analyze data from various sources to generate impressive visualizations.

Real-time, accurate graphics

PIERO's advanced line and texture tracking technology follows the position of the camera even when it's moving. This ensures that graphics are always shown in the proper perspective on the field of play.



Key benefits



Speed

PIERO is easy to deploy and use. Fast clip creation and turnaround guarantee high-quality on-air results even in time-constrained productions.



Reach

PIERO is the world leader in sports graphics analysis, with an extensive global customer base. PIERO's graphics can regularly be seen during coverage of high-profile international sports events such as the FIFA World Cup and the Olympics.



Quality

PIERO's simple workflow and outstanding Ross customer service make it a joy to work with. Its graphic quality and ease-of-use are regularly praised by customers around the world.



Revenue

PIERO offers the capacity for additional sponsorship opportunities for broadcasters. The system's effects and graphics can be customized to achieve maximum brand visibility for



Trust

PIERO's development has been and will continue to be a collaborative process. As an industry leader in live video production, we at Ross understand the importance of understanding, working with, and building strong relationships with our customers.



Scope

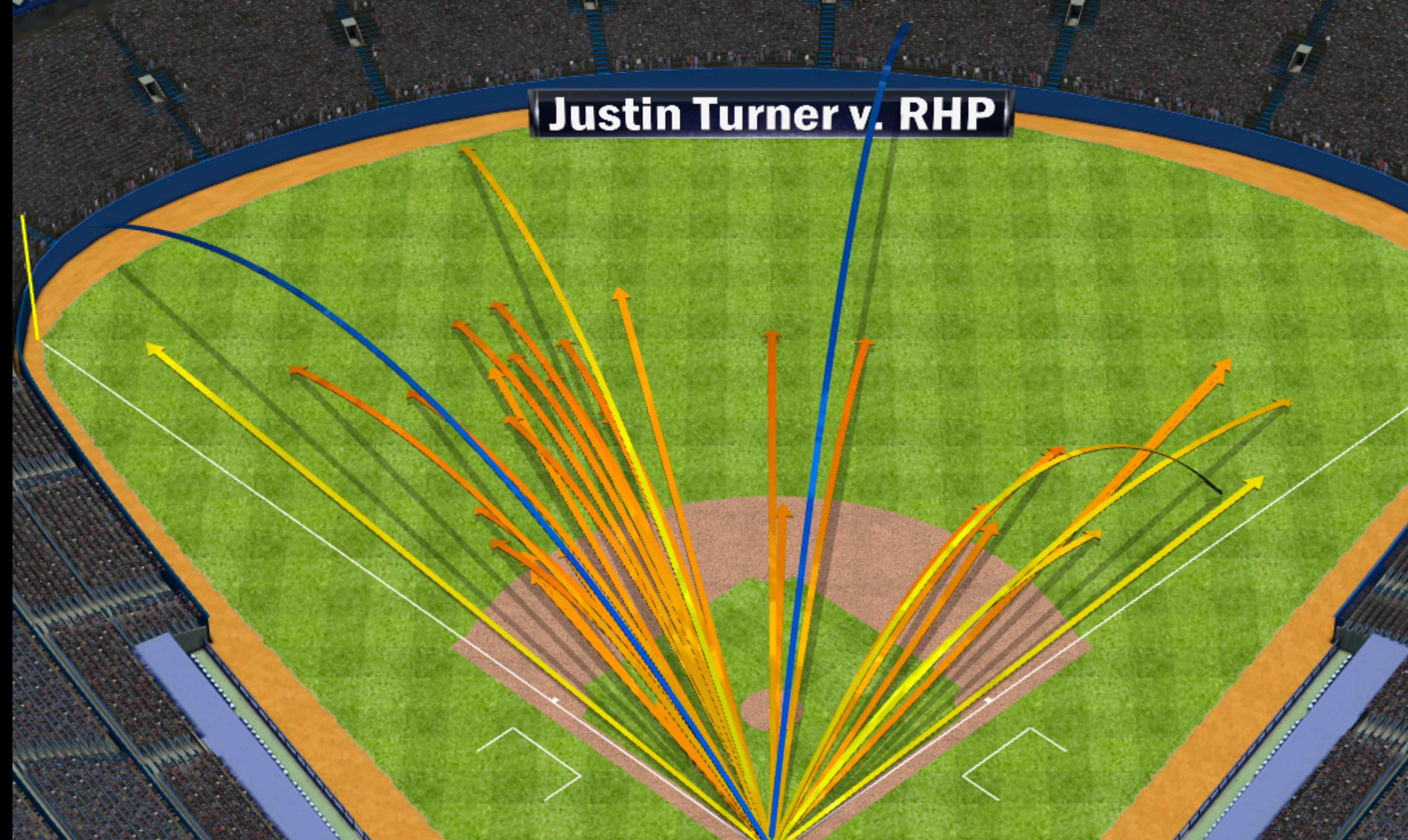
Ross is continuously investing in research and development of sports graphics to deliver groundbreaking analysis features. PIERO is constantly evolving with new features and effects.

Data visualization

PIERO works with Event and Tracking data. The data-driven graphics provide rich insights into the patterns of play by teams and players. PIERO's data visualization module creates graphics such as shot spray charts, passes between players, heatmaps, automated tracks for all players, historical set plays, and more.

The data is easily filtered by date, game, and player before it is visualized in perspective on the real camera shot. Since PIERO renders graphics in real-time it is possible to overlay meaningful information on the opening shot of a soccer 2nd half or whilst a baseball player gets ready to bat.

The PIERO remote API is open to all customers. It allows clients' internal data science teams to use PIERO as a renderer to visualize their key performance indexes.



Premium Modules

PIERO is a modular system with optional Data Visualization and Touchscreen features. The 'Data Visualization' module generates graphics from game data supplied by third-party providers. The 'Touch & iPad' module allows remote control via touch-screen and tablet through a simplified user interface.

Touchscreen

PIERO's touchscreen interface provides a simple and interactive way to add graphics to a video clip. The intuitive and fully customizable user interface adapts to any screen size, location, and production style. Presenters can move a fielder to a different position, highlight a space, reveal distances, cue pre-made clips, and use them to speed up workflows using video analysts based in different locations.

The system is portable and easily extended thanks to its simple TCP/IP connection. Multiple devices can connect simultaneously, making it a great choice for remote production.

PIERO has been designed to allow producers and analysts to make changes up until the last minute and still make it to air!

Compatible with a variety of touchscreen devices as well as with iPads*

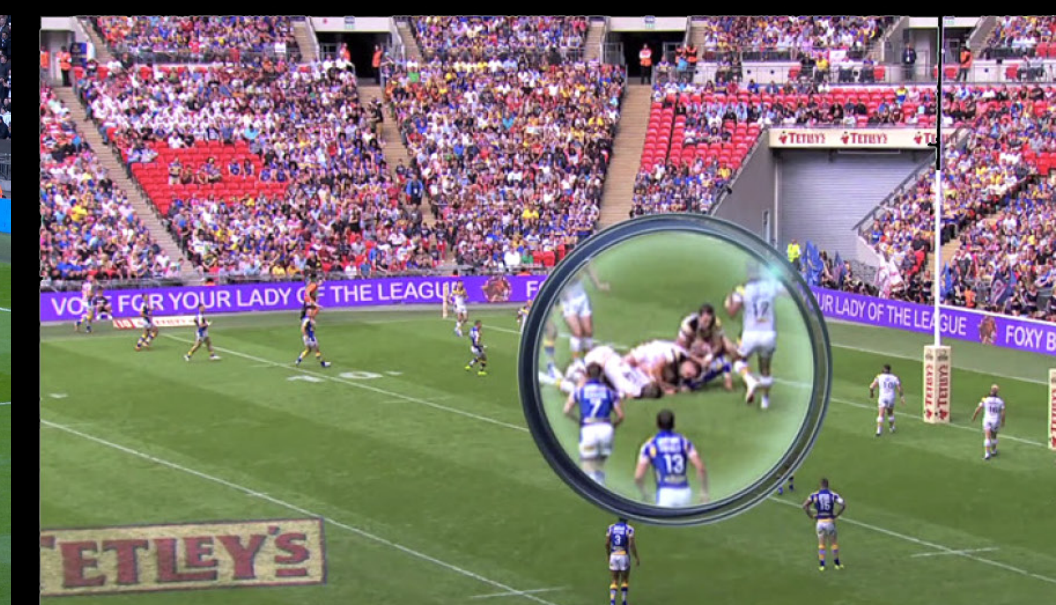
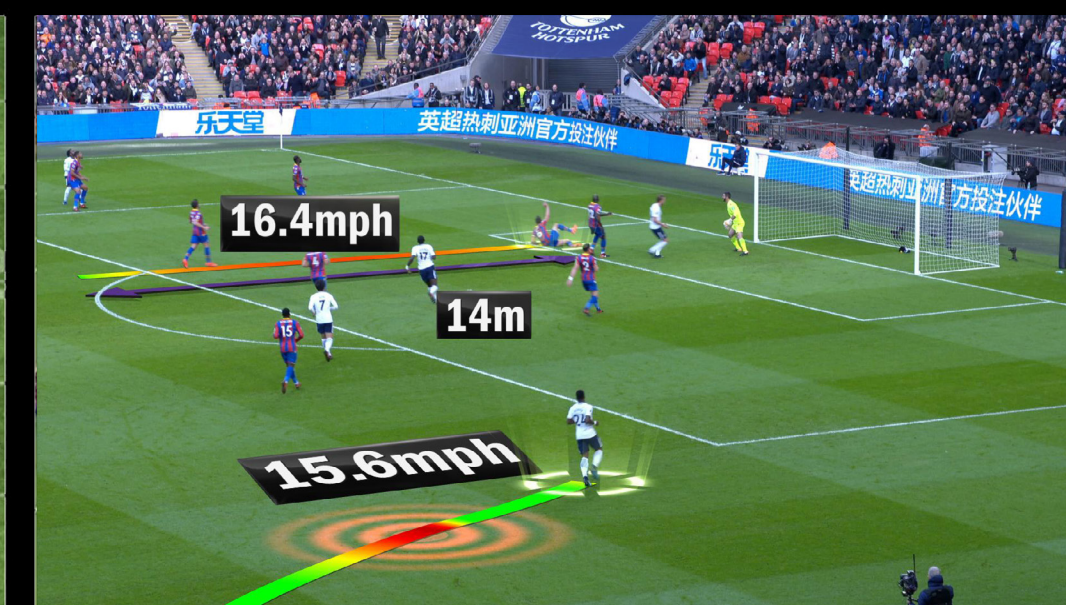
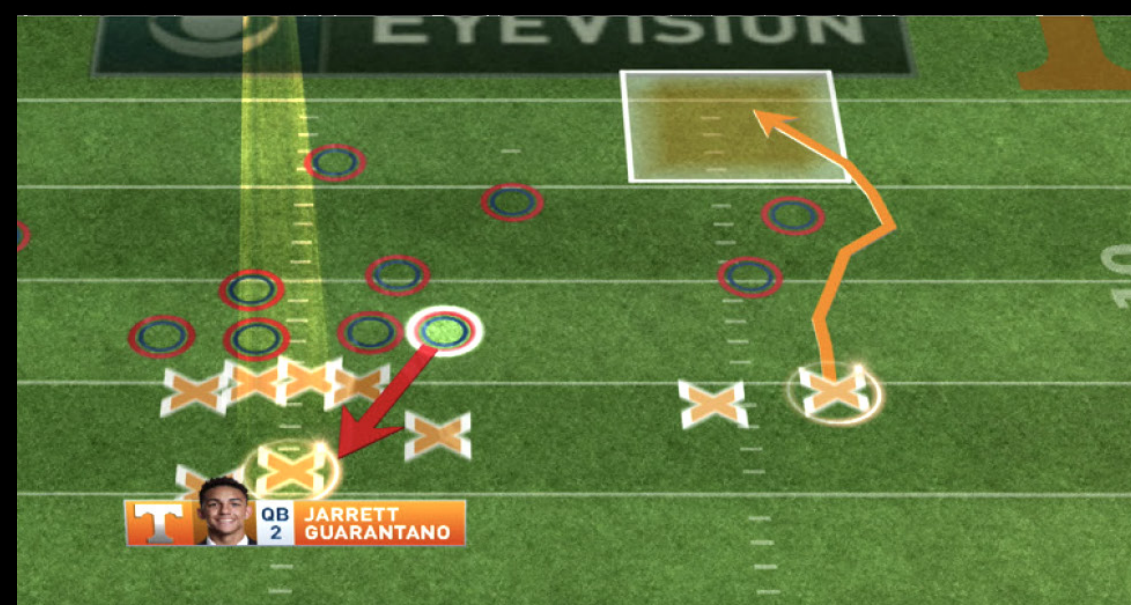
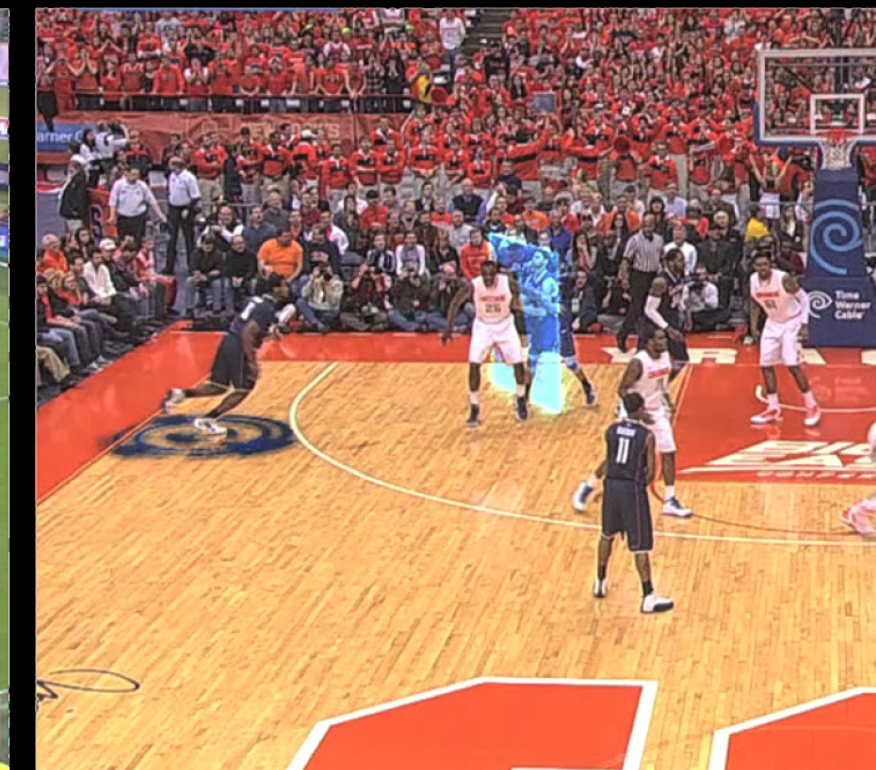
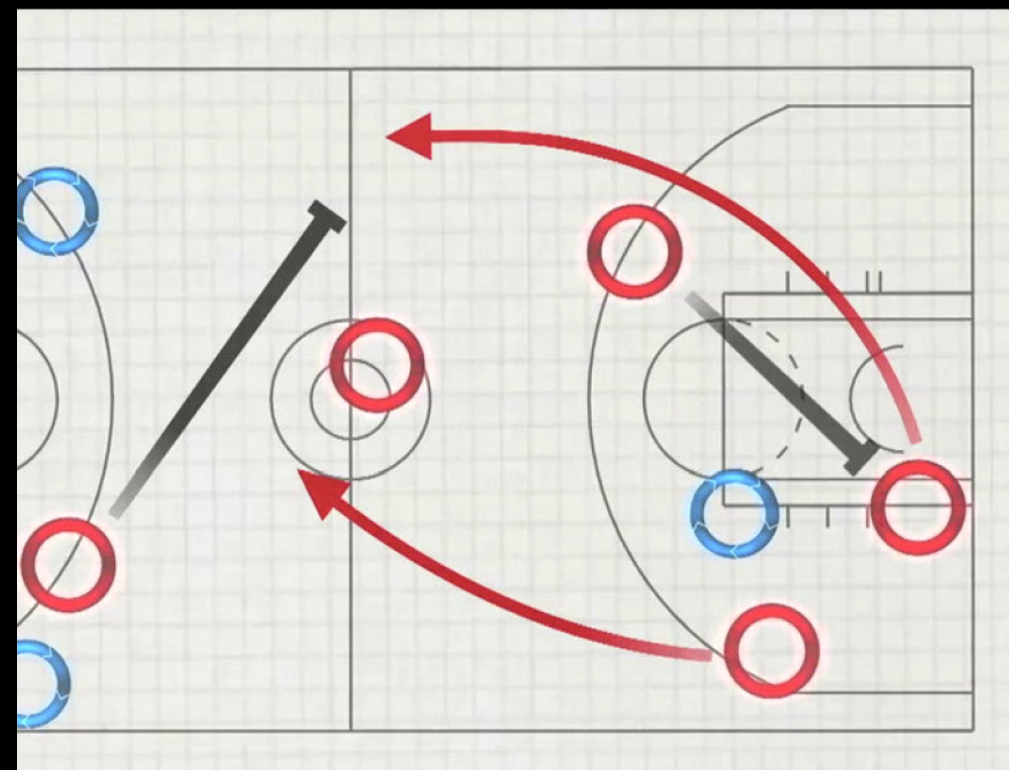
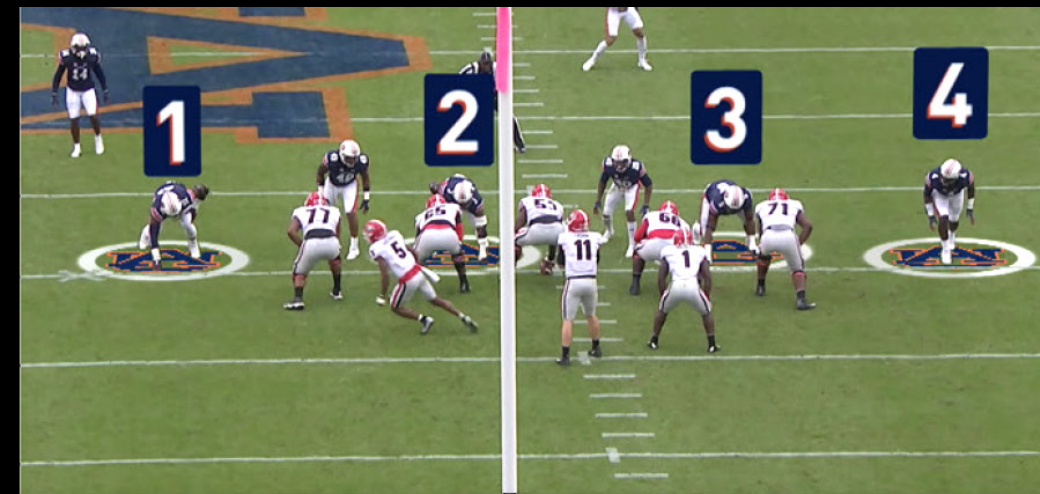
*Not all touch features may be available on iPads, please contact Ross Video for more details.



Effects

With over ten years of experience in sports graphics, PIERO has crafted an unrivalled palette of effects to help you analyze the action. PIERO works closely with clients to develop new styles and customize existing effects. Effects can be used in both real and virtual settings and can blend seamlessly between the two.

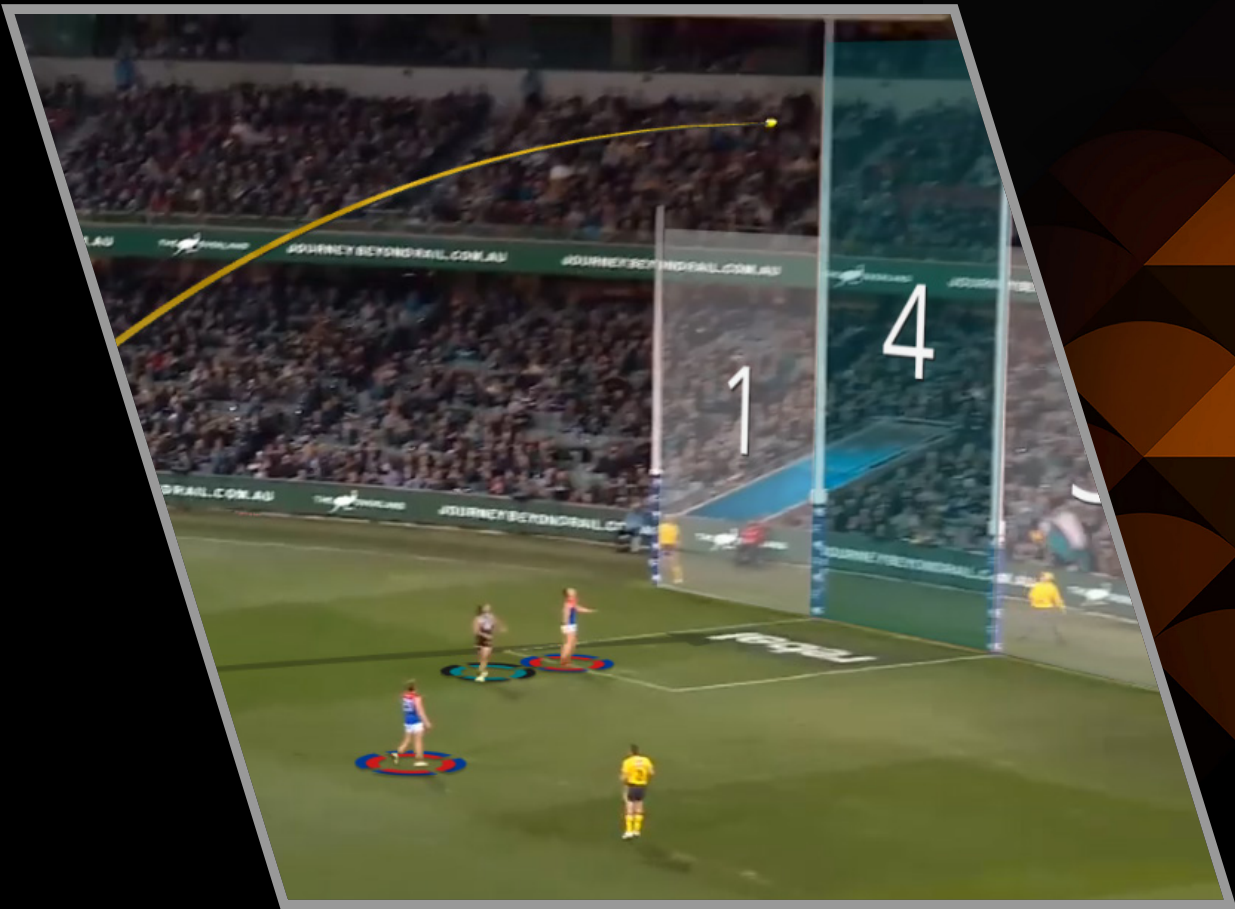
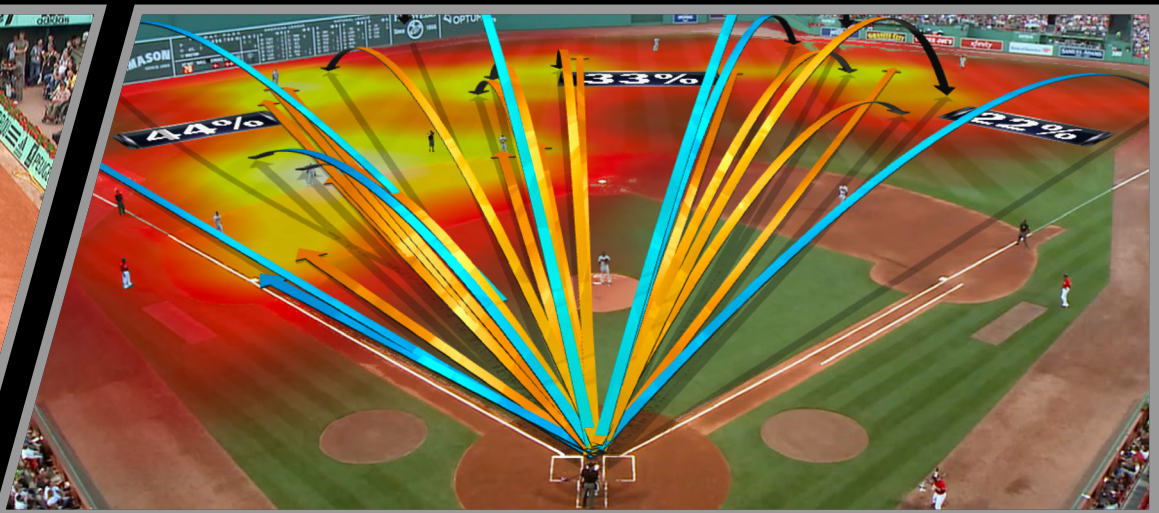
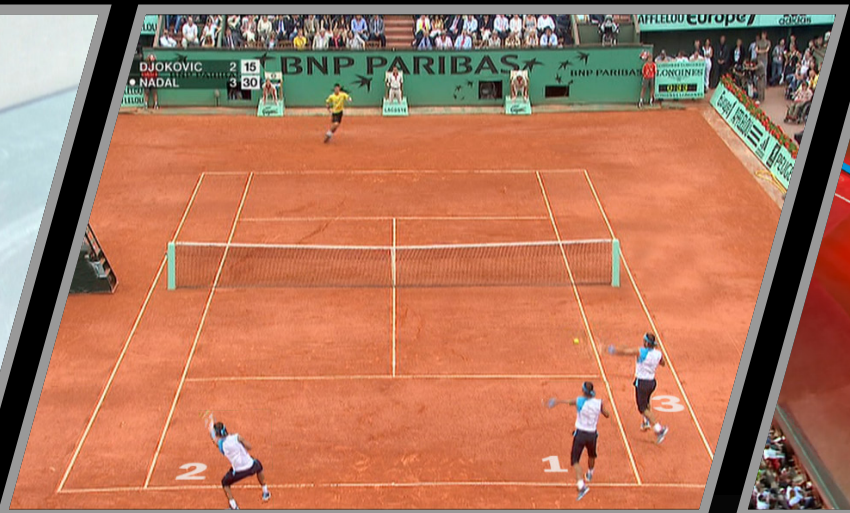
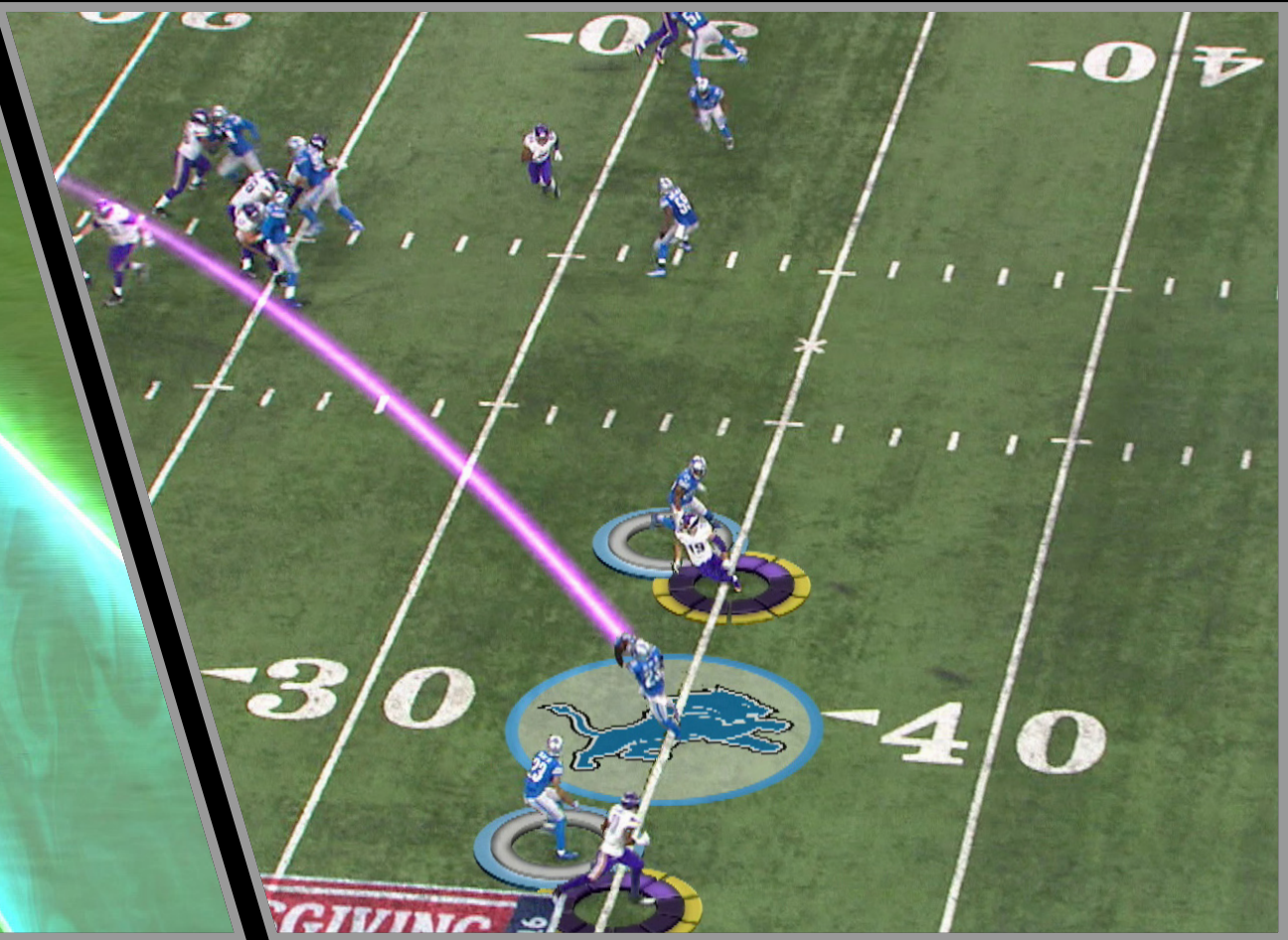
- Offside line
- 3D overhead
- Arrows
- Time lapse
- Virtual stadium
- Scores & badges
- Player glow
- Laser wall
- Virtual player run
- Tactical board
- Goal arc overhead
- Free kick circle
- 3D virtual replay
- Removeable players
- Player line-up
- Magnifier
- Markers
- Player drag
- Timer
- Tracked formation
- Spotlight
- Viewpoint
- Caption tracker
- Virtual presenter
- Goal Arc
- Timer and Caption Tracker while Pitch Zone
- Down and Distance line
- Tracked arrows



Sports

PIERO's system supports 20 of the world's major sports, and the list continues to grow. With PIERO, you can bundle as many sports modules as you need without requiring additional software.

- American Football
- Aussie Rules Football
- Badminton
- Baseball
- Basketball
- Cricket
- Field Hockey
- Gaelic Football & Hurling
- Handball
- Horse Racing
- Ice Hockey
- Kabaddi
- Lacrosse
- Netball
- Racing Formula 1 Moto GP
- Rugby Union & League
- Football (Soccer)
- Tennis
- Table Tennis
- Volleyball Beach & Indoor
- Athletics
- Curling
- Esport
- Generic Telestrator



Specifications

PIERO operates on a single machine running Linux, and the software is licensed annually and verified by USB dongle. PIERO provides the machine, software and dongle. The touch interface can run on any Windows platform or iPad (not supplied).

PIERO users can also build their own machine, please contact Ross Video for more details on recommended specification.

System

Hardware

1RU server with Nvidia RTX A4000 ADA running on Linux Ubuntu. AJA and Matrox cards supported for HD-SDI / 12G-SDI connectivity.

PIERO Software

Piero Sports Analysis engine with file mode timeline analysis interface. Requires licensed USB dongle or software license.

Optional Modules

Data module and touchscreen module.





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Ross Video has a complete range of technical services available to ensure that your PIERO installation is a success.

Operational Training can be provided at Ross Video, on-site, or on the web. Experienced Ross operators will teach your staff to get the most out of your new system and enhance your productions.

Commissioning is a service to help get your production system properly configured, connected, and installed. This service is performed by factory-trained Ross technical staff.

Technical Training can be provided at Ross Video, on-site, or over the web. Technical training will teach your engineering staff the technical details of the system you have purchased. System configuration, interfaces, databases, and routine maintenance procedures are some of the topics covered.

PIERO comes standard with a 1 year comprehensive warranty. Extended Warranties on hardware and software maintenance are available for an annual fee.

Technical advice is available on-line, by telephone, or email to Ross Video – Included for the life of your system.

Contact Us

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Technical Support

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www.rossvideo.com

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