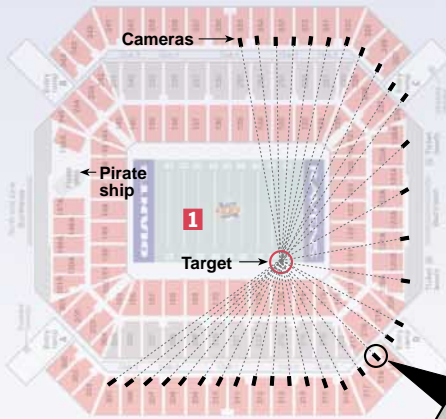


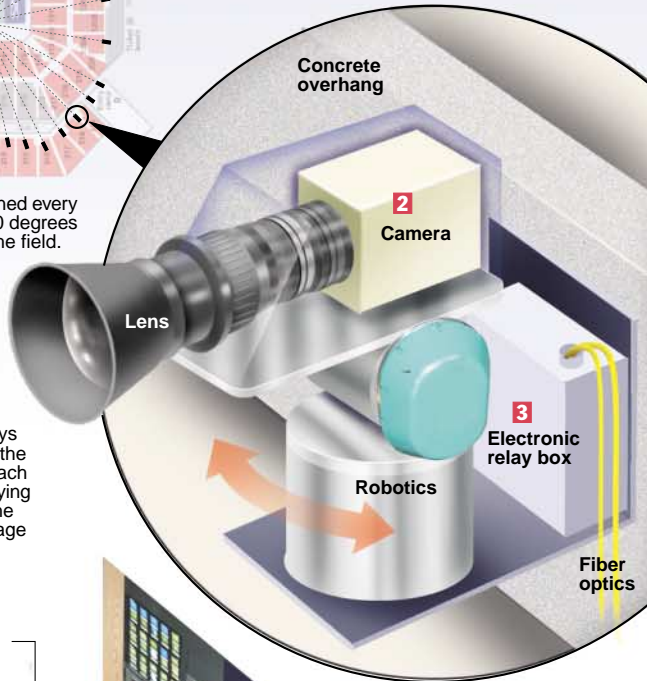
Making history in Raymond James



Instant replays in 3-D

When viewing instant replays, referees used to review the play from five or six independent camera angles. That's old school. Now it may all be done in 3-D, thanks to CBS Sports. The project called EyeVision was 18 months in the making and will make its debut in the Super Bowl today, giving viewers a chance to see instant replays with freeze-frame effects like those in the movie *The Matrix*. Here's how it works:

- 1** Thirty-three cameras positioned every 8 degrees apart will cover 270 degrees of any designated target on the field.
- 2** The cameras are operated by Mitsubishi robotics. A lead camera is selected and the rest move in unison with the lead camera. Each camera costs \$20,000.
- 3** An electronic relay box relays information coordinates from the control booth, which allows each camera to compensate for varying distances and angles so all the cameras record the same image from the same distance.



In the control booth

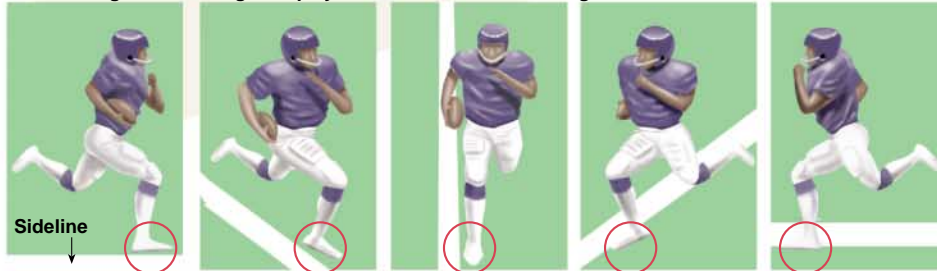
The producer monitors the output from each of the cameras and selects the lead camera.

The cameraman controls the lead camera with his monitor, which allows him to tilt, swivel and zoom through fiber optics.

Replay technician works with the digital disc recording monitors, allowing him to review an image and freeze frame.

A dial allows the technician to swivel around a frozen image from any of the 33 recorded angles. The effect is virtual 3-D (see images below).

The rotating camera will give replay officials a view from all angles for controversial calls



Sources: CBS Sports and Princeton Video Image

Times art — JEFF GOERTZEN