



## VIRTUAL OFFSIDE LINES FOR VAR IN FOOTBALL

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DELTA-offside uses DELTACAST image processing technology to overlay 2D or 3D virtual offside line quickly and accurately to help video assistant referee (VAR) operations during football games.

### FIFA-CERTIFIED

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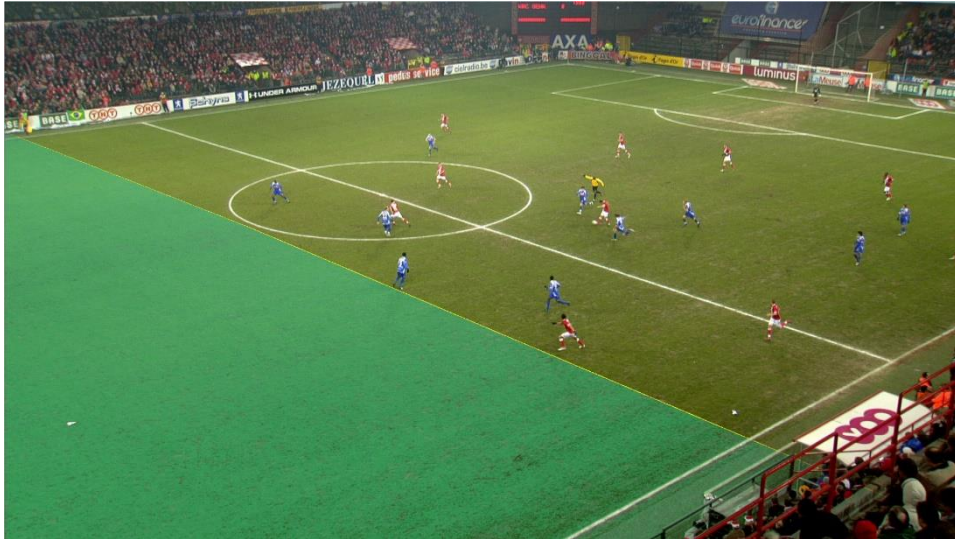
### TRUSTED BY MAJOR FOOTBALL LEAGUES



## KEY FEATURES

System includes 2 offside lines generation mode:

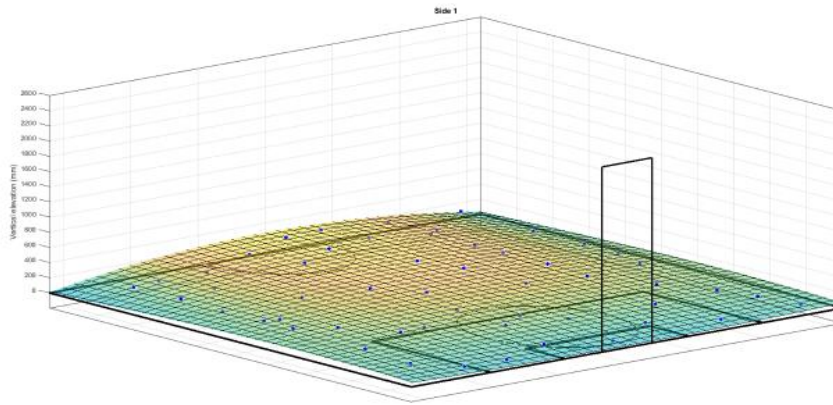
- 2D mode
  - Offside line drawing is done from a point of the pitch (typically player foot)
  - Please note that in this mode 2 lines are available if needed



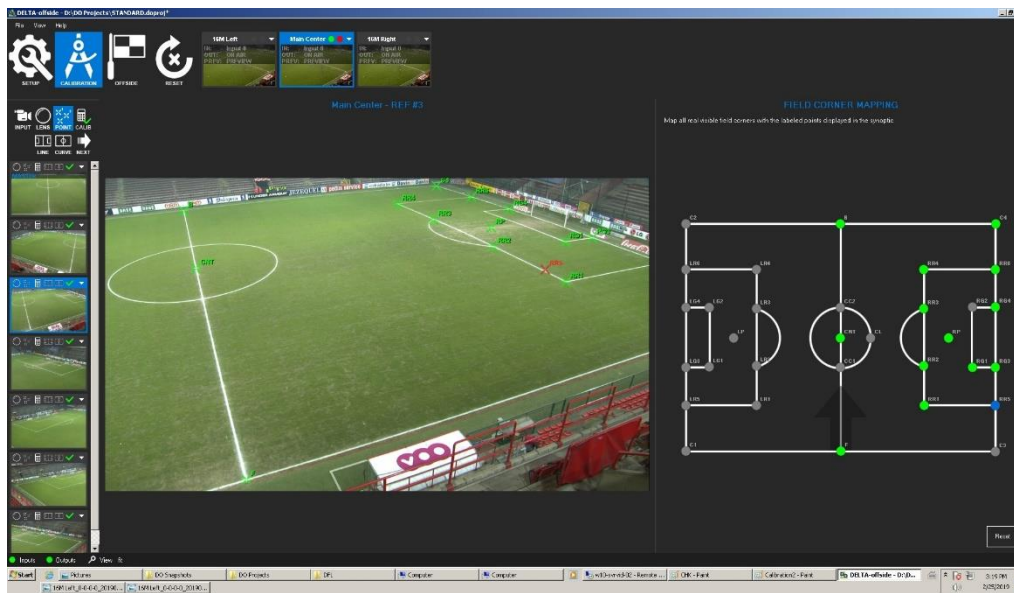
- Stereoscopic mode (3D) - optional
  - Offside lines drawing is done from a projection to the ground of a point located in space (typically head, shoulder of a player).



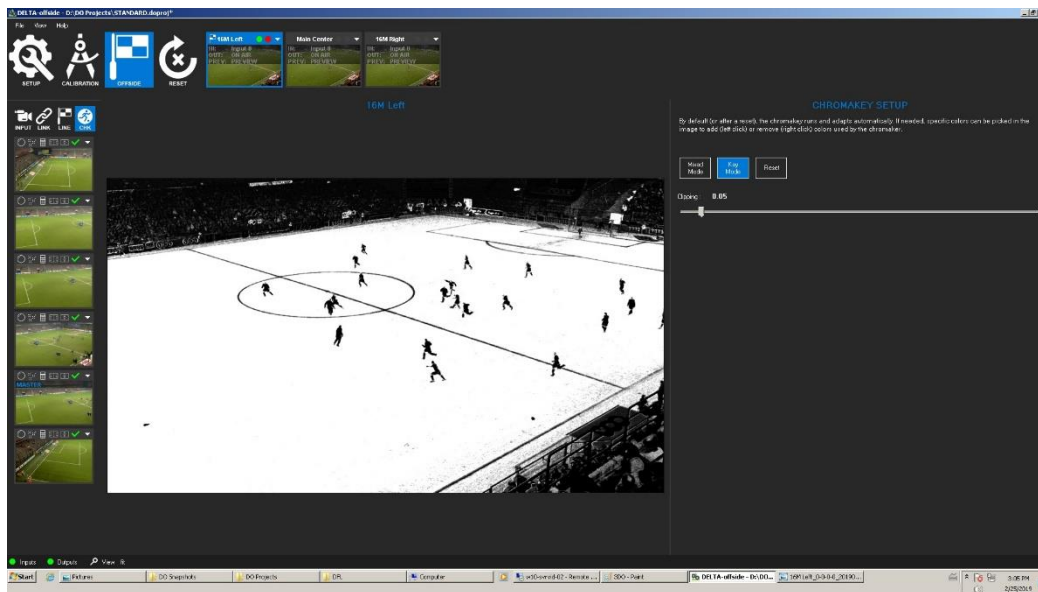
- System includes curved line technology that allows to draw lines that follows the curve of the pitch. This feature increase the precision of the system.



- Calibration of up to 10 cams. Typically DELTACAST suggest to calibrate at least 16M left and right cams, main center, behind goal (tactical), reverse and close center as main cam backup.
- Automatic calibration feature that reduces consistently setup time of the system.



- DELTA-offside includes an adaptive chromakeyer that automatically takes lightning or weather conditions changes into account



- System allows automatic offside line determination within a few seconds
- System includes safe operation mode that allows offside line use in all conditions:
  - extreme weather condition like snow, fog, smoke...
  - close-to-all situations (no need to see lines of the pitch)
  - very small stadiums (cameras height only has to be at least 4m in height from the ground)





(please note that system just needs to see the pitch lines during the calibration process)

- Use a revolutionary image processing technology to superimpose virtual offside line tied to the pitch without any sensors required on the production cameras
- Ergonomic operation interface
- very easy graphics look & feel on the fly configuration:
  - Simple color picking for line, area
  - Animated textures possibility for line, area & logo
  - Lines width and margin can be adapted on the fly
  - Lines can be drawn with or without offside area
  - Transparency can be separately adapted for each graphic