

PRESS RELEASE

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TSG 1899 Hoffenheim selects RedFIR® tracking technology from Fraunhofer IIS

The training center of the TSG 1899 Hoffenheim soccer club (Nachwuchsleistungszentrum NLZ) has adopted the RedFIR® technology developed by the Fraunhofer Institute for Integrated Circuits IIS. RedFIR® is a wireless tracking technology that locates people and objects in real time with high precision. Player and ball position, which are determined by the RedFIR® technology, are the basis of a training analysis provided by SAP, the soccer club's primary sponsor.

RedFIR® is the foundation of a system that TSG 1899 Hoffenheim will be using to produce detailed training, game and player analyses. The analyses are carried out by equipping the players and the ball with miniature wireless radio transmitters. Player and ball movements are recorded using receiver antennas placed around the NLZ practice field. The information is then made available to the coach in real time via a HANA platform from SAP. This allows the coaches to provide players direct feedback on their progress and performance during practice. Other data such as pass length or player speed can also be determined via RedFIR®. Even complete game plays and scenarios can be simulated.



TSG 1899 Hoffenheim will be using the RedFIR® tracking technology from Fraunhofer IIS during practice sessions. © Fraunhofer IIS | Color, print quality image available from:
www.iis.fraunhofer.de/en/pr

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Fraunhofer sports technologies RedFIR® and GoalRef™

Over the past decade Fraunhofer IIS has been dedicated to integrating technologies into sports applications. The RedFIR® technology precisely locates moving persons and objects in real time. A major advantage over video-based systems is that the wireless transmission allows an analysis to be carried out even when objects are obscured. The transmitters are tiny and embedded in footwear, uniforms, and the ball. Impact-resistant and waterproof, they are extremely rugged. Dedicated system software calculates each transmitter's position in real time and allows the information to be immediately displayed on a 3D user interface. This provides the basis for determining specific information such as ball possession, passes, shots-on-goal, crosses and physical data such as number of steps and meters run, as well as the player's speed when running or sprinting.

The FIFA-approved goal-line technology GoalRef™ makes precise goal detection in real time possible. Fraunhofer's technology could reliably detect critical goal decisions, like the ghost goal in the match Hoffenheim-Leverkusen, in any situation and weather. Even if the ball is entirely obscured, GoalRef™ will provide the referee with the accurate information whether a goal has been scored or not. GoalRef™ is compact and easy to install and comprises merely an intelligent goal, a ball and the match official's wrist-watch.

Additional information at: www.redfir.de and <http://www.goalref.de>

About Fraunhofer

The **Fraunhofer-Gesellschaft** is the leading organization for applied research in Europe. At present, the Fraunhofer-Gesellschaft maintains 66 institutes and independent research units. The majority of the more than 22,000 staff are qualified scientists and engineers, who work with an annual research budget of 1.9 billion euros. Roughly two thirds of this sum is generated through contract research on behalf of industry and publicly funded research projects. Branches in the USA and Asia serve to promote international cooperation.