



1ST & FUTURE

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Theme: Communicating with the Athlete

Description

New technologies that will improve the secure and safe means of communication between a coach on the sideline or in the coaches' booth and a designated player on the field.

Background

The Coach-to-Player system is a direct point-to-point transmission from the sideline to the field of play. The current system consists of a radio receiver, battery pack, and small speakers embedded in the pads of the helmet. The transmission is fully encrypted to ensure privacy. The receiver cannot impede the player's ability of hearing their surroundings while monitoring the transmission.

Objectives

The goal for the next generation system is to explore alternative solutions for delivering communications from the coach to the player while the player is on the field. Any system should be mindful to reduce any potential risk of injury, and minimize the weight and size while increasing efficiency and fidelity. The system must be wireless and operate in the least amount of RF space in the complex frequency environment of an NFL stadium on game day. Any system must have, or be able to incorporate, a "cut-off" mechanism to terminate the communications at specified times during the game when such communications are prohibited. The system must be capable of being used in games and team practices.

Specifications for consideration:

- *Encrypted, point-to-point simplex transmission*
- *Frequency agile (i.e., avoid heavily used frequencies such as Wi-Fi)*
- *Minimum of 6 hours operating window*
- *Modular, easy to switch between the designated players eligible to use it*
- *Speaker, in-ear, bone conduction or other audio transmission methods*

For more information, visit www.tmc.edu/1st-and-future.