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DIGITAL MEASUREMENT SYSTEM FOR ANTHROPOMETRIC PARAMETERS OF YOUNG BASKETBALL PLAYERS

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Important anthropometric parameters for assessing the prospects of young basketball players include the following: height, weight, taking into account the percentage of fat, the size of individual body parts (length of arms, fingers, and so on), lung volume, and the size of the field of vision. An analysis of known devices for measuring the anthropometric parameters of basketball players shows that separate devices unrelated to a common database are used to evaluate each parameter (height, weight, size of body elements, and so on). In order to reduce the time spent on measurements and improve the quality of data processing. It is rational to create a digital measurement system in which measuring instruments connected to the processor unit and the database (Fig. 1).

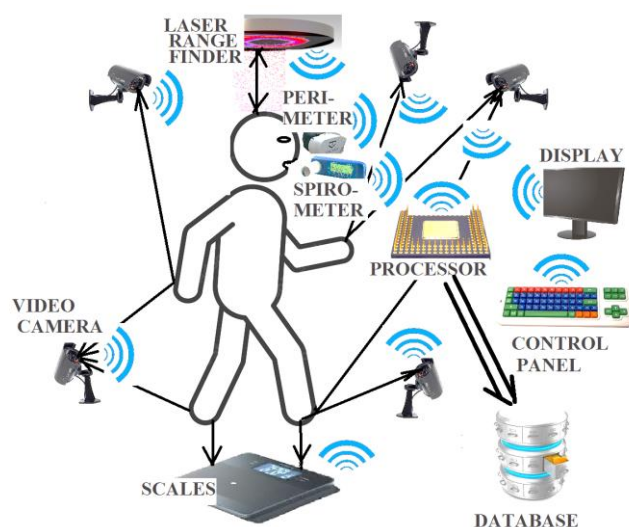


Fig. 1. Digital measurement system for anthropometric parameters of young basketball players

The signals from each measuring device wirelessly transmitted via transmitters to the processor, where they must be processed using special software. The processing results are then sent to databases and, if necessary, to playback devices for study. Structurally, the measuring part of this system can be placed in rooms related to training, for example, in a locker room.

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MEASURING THE PHYSICAL QUALITIES OF YOUNG BASKETBALL PLAYERS DURING TRAINING

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Devices for measuring strength, endurance, movement speed, and flexibility can be combined constructively and from the point of view of software into a common measurement system. At the same time, these devices are quite miniature, they can be mounted on the body, clothes and shoes of a basketball player (microphones, myographic sensors), or on the walls and ceiling of the room and not interfere with the training process (Fig.1).

The measurement of strength parameters of young basketball players can be assessed by analyzing myograms, carried out during training according to the readings of myographic sensors mounted on muscles, with the transmission and processing of information in real time. Endurance during training is

suggested to be assessed by changes in pulse rate, respiration and blood pressure according to the readings of a smart watch mounted on the wrist and microphones on clothing mounted in the chest area. Measurements performed in real time. The measurement of speed can be estimated by the frequency of contact between the basketball player's feet and the floor with microphones installed in the sole of the shoe, and flexibility using video cameras.

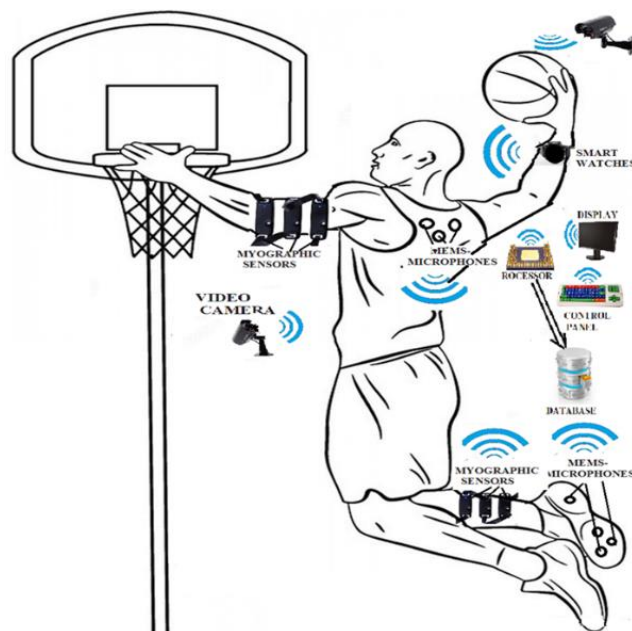


Fig. 1. The measurement system of strength, endurance, movement speed, flexibility of a basketball player during training

The signals from each measuring device wirelessly transmitted to the processor and processed in real time. Information about the basketball player's condition processed during training, promptly analyzed by the coach, also entered into the database. To be able to operate such a system, it is necessary to create the appropriate software.

The athlete's coordination should be assessed separately using stabilometric systems. Information about the results of this survey should also be integrated into the general data stream, which also requires software development.

The condition monitoring system during training is especially important for young basketball players, as it is necessary to ensure safety for their health.

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МОДЕРНИЗАЦИЯ СИСТЕМЫ ЗВУКОУСИЛЕНИЯ НА ВЕЛОДРОМЕ МКСК «МИНСК-АРЕНА»

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Современные спортивные объекты требуют высококачественных систем звукоусиления, обеспечивающих равномерное покрытие аудиосигналом, высокую разборчивость речи и мощное музыкальное сопровождение. Велодромы, как многофункциональные спортивные комплексы, часто используются не только для соревнований, но и для различных массовых мероприятий, что предъявляет повышенные требования к их акустическим системам.

В настоящий момент велодром МКСК «Минск-арена» предназначен для проведения соревнований по велосипедному спорту, соревнований по хоккею на траве, занятий по теннису, сквошу, бадминтону, а также проведению различных мероприятий. Трибуны «Велодрома» вмещают около 2000 зрителей.