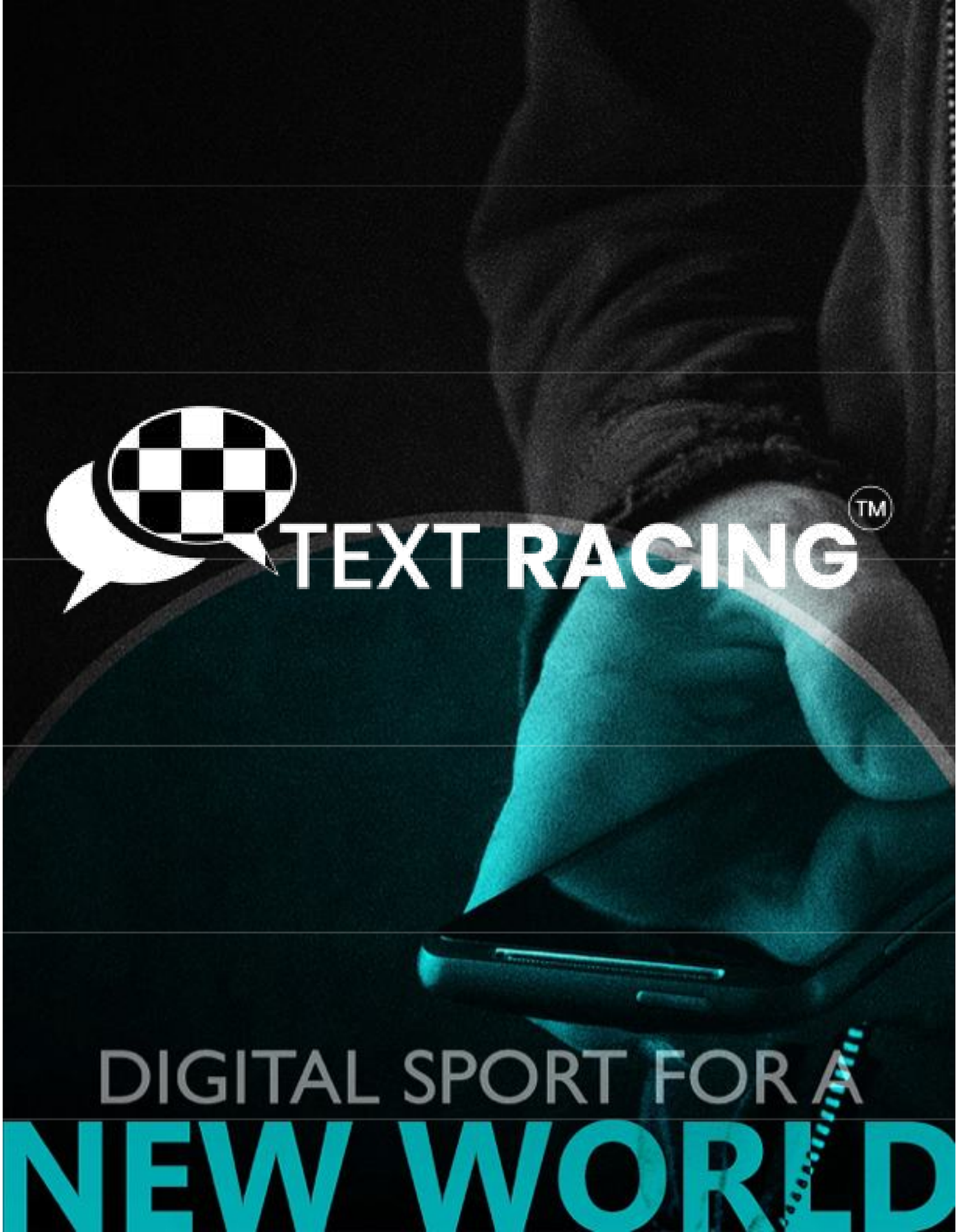

TEXT RACING™
DIGITAL SPORT FOR A
NEW WORLD

" texting as a sport activity "

Texting is an act that requires a device on which one can input digits and characters into a digital environment enabling wireless communications. In 2017, the State of Mobile report, named 'Flurry Mobile', stated that on average in the US, people spend about five (5) hours a day on their mobile devices texting, playing games and reading news [1]. According to an analysis by Statista, in 2019, a total of more than two trillion text messages were wirelessly exchanged only in the US [2]. On a daily basis twenty-three billion text messages are exchanged worldwide. Moreover, according to the Pew Research survey in 2019, smartphone owners in the US were 81%. An increase of about 46% from 2011 when only 35% of Americans owned a mobile phone[3]. In 2020, about 3 billion people owned a smartphone worldwide. As part of the daily routine, for many a second away from their phones may have a particular toll on them as it can affect their way of thinking and emotions [4]. This is particularly true in the aftermath of the worldwide spread of the 2019 Coronavirus Disease (COVID-19), which has impacted behaviors, lifestyles, and taken a toll on people's physical and mental health. Forced to socially distance from the demand of worldwide lockdowns, smartphones have become one of the major means for our daily interactions supported virtually via video calls, online streamed content , and video game parties. Tapping, swapping and clicking are all part of the action of texting.

People check their phones at least 47 times a day. Those motions which, in general, occur in a very random sequence and pattern, can create a musculoskeletal pressure on the upper limb that may affect the proper functionality of the upper limb. In the following article we propose texting as a sport activity with the objective of leveraging the usage of smartphones in an organized, instructed pattern that may minimize the musculoskeletal demand and consequently the risk of musculoskeletal disorders associated with random movements. We describe texting as a sport activity through the lens of the definition

Per definition of Oxford Dictionary, sport is "an activity involving physical exertion and skill, one regulated by set rules or customs in which an individual or team competes against another or others" [5]. By rule of this definition, chess for instance, would not qualify as sport. Although a competitive activity, chess is not physical but rather a mental/cognitive activity. According to GAISF (Global Association of International Sports Federations) sport has to contain an element of competition, not rely on an element of "luck" specifically integrated into the sport, safe for the participants, and not rely on equipment provided by a single supplier2,3. As the leading organization of all (Olympic and non-Olympic) international sports federations, GAISF identifies five (5) categories for sport activities, although an activity may fall into multiple categories: 1) primarily physical (e.g. rugby or athletics), 2) primarily mind (e.g. chess or go), 3) primarily motorized (e.g. Formula One or powerboating), 4) primarily coordination (e.g. billiards) and 5) primarily animal-supported (e.g. equestrianism) [6, 7].

Highly televised sports such as football, basketball, soccer or the Olympic games are the physical activities that often come to the mind when we hear the term sport. In these activities, one's skills are measured and evaluated against a worthy opponent while providing entertainment to an audience. In recent years, organized video-gaming competitions have emerged and are denoted as E-sports. The latter are televised and streamed as online entertainment via a multitude

Despite the name, the debate on E-sports being considered as a sport is ongoing. However, given the above mentioned elements outlined by the GAISF in defining a sport activity, organized video-games activities fit the definition of sport. Albeit exclusive of a physical execution, they require exertion of the brain and skilled dexterity, and are competitive. Similar attributes can be applied to texting. In the following section, we dissect the aspects of texting as sport according to the criteria and categories identified by GAISF. The texting activity as we proposed here does not confine to a single category.

Like most familiar sports, physical exertion is an inherent component of texting as it is an act that requires muscle activity to hold the device (smartphone or tablet) and input data. The simultaneous occurrence of these two actions requires coordination and counterbalance between the motions of the thumb (involved in the texting act), the finger flexors and, the wrist extensors to reinforce the gripping of the device. A peculiarity of physical activity is its contrasting impact on the musculoskeletal system. Being physically active is fundamental for the maintenance of good health and fitness. Exercising and therefore applying biomechanical pressure on the musculoskeletal system increases the body's metabolic processes, a result of an increase in blood flow to supply adequate energy to sustain the expenditure of energy during physical activity. Engaging in physical activity therefore promotes good functionality of the muscles and consequently other tissues and organs of the body. Nevertheless, repetition can also become detrimental, leading to injuries that are typical of constant sport activities. In that regard, texting as a sport is not an exception. Several studies measuring muscle activities involved in texting motions show that different factors can contribute to the risk of musculoskeletal disorders of the hand/wrist and neck/shoulder [8-10]. These factors include texting styles (i.e. holding a device with one hand versus both hands), the input device (physical keyboard versus touch screen), and the body posture while texting [11-14]. One of the objectives of these studies has been to set the basis for ergonomic design of devices and keyboards that will help reduce the biomechanical load on the hand/wrist with texting.

In line with the GAISF requirement for sport activity, texting as we propose here does not present, to our knowledge, a critical harm to potential contenders. In the proposed sport activity, participants utilize their 3-Dimensional context to comply with the instructions for the physical activities. The endpoint of which is mediated through the input into a 2-Dimensional context (typing into the digital environment). Moreover, engaging contestants in physical motions that involve the upper limb (hands-arms-shoulders) (Figure 1) presents some fitness benefits that can help the muscle capacity in those body regions. In the case of the hand, for instance, the practice of these motions may help counteract age-related degenerative effects on it as aging has been associated with deterioration of the hand functionality, affecting precision grip, pinch strength and dexterity [15, 16].

" texting as it is an act that requires muscle activity to hold the device and input data "

Primarily Physical
(e.g. rugby or athletics)

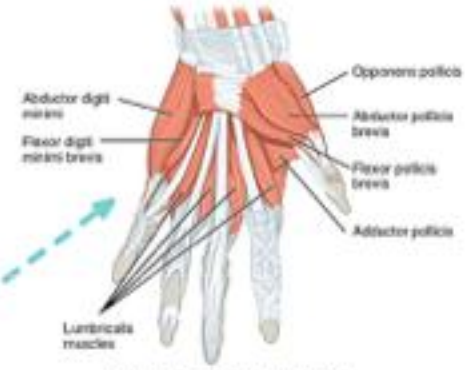
Texting as a Sport (TaaS)

"The human muscular system is the machinery that drives athletic performance. Among their functions, the more 600 skeletal muscles generate skilled movements and produce energy for sport-specific competition."

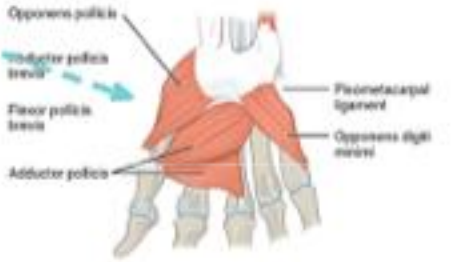
http://www.sports-training-adviser.com/human-muscular-system.html

- Speed & Accuracy
- Information Literacy

Brain



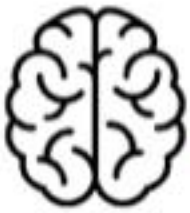
Superficial muscles of left hand (palmar)



Deep muscles of left hand (dorsal view)

TEXTING IS AN UNTAPPED ATHLETIC SKILL

Primarily Mind
(e.g. chess or go)



PROMT
"ABV345@JK"

Brain

TIME LIMIT
[CLOCK 30 sec.]

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890
!@#$%^&*()_+{}:"|><?

2 Primarily Mind
(e.g. chess or go)

All sports have one commonality: competition. They require strategies, planning and schemes to attain the goal that will adjudicate one's victory over an opponent.

In the texting contest, participants are called to evaluate and scan a digital environment, mastering their ability to process information and understand the correct solution to a direct or indirect query given in a certain time frame (Figure 2). There is a cognitive/mental component in texting that is manifested through sharp reflexes and translated into great dexterity. The fact that, in the texting sport, one combines both mental and physical components (Figure 1) lead to the establishment of a learned neuromuscular pattern that may enhance cognitive functions including attention, memory, reasoning and physical balance [17,18].

3 Primarily Motorized
(e.g. Formula One or powerboating)

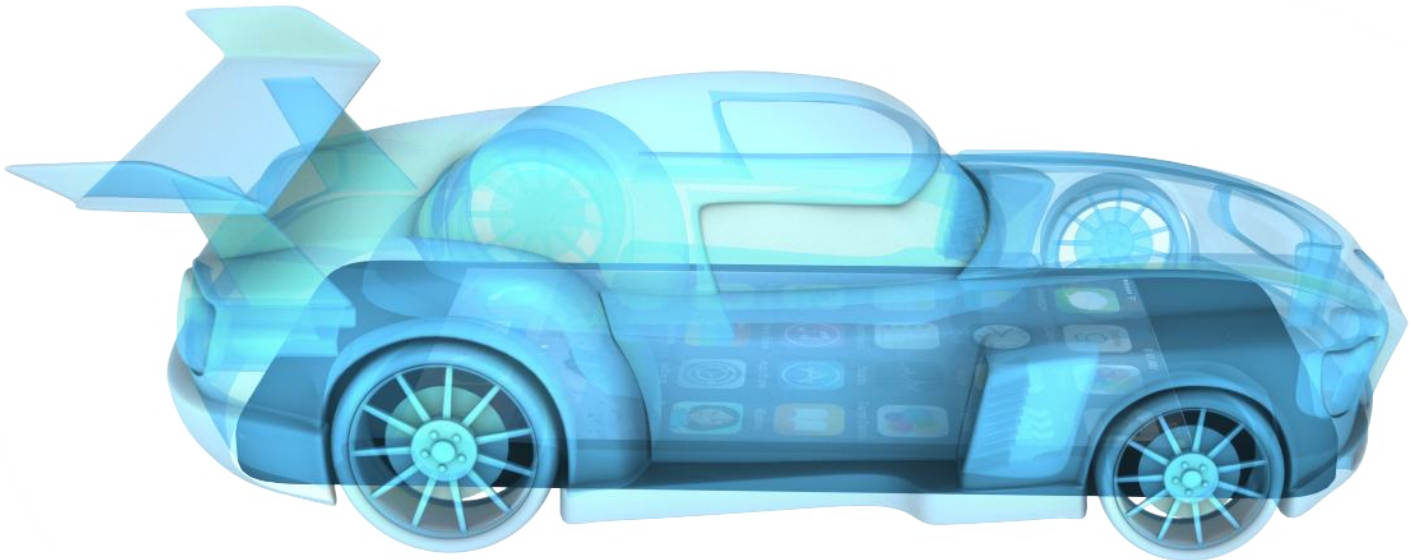
In this sporting activity, the instructions and queries are designed to test the physical prowess and skills of the contestants in terms of reflexes, speed and accuracy. Participants are called to exhibit their skill sets through motor racing competitions (Figure 3) using the hardware and software relatively innate to all smartphones. The touch screen display is both a static and dynamic user-friendly designed interface that utilizes a keyboard completely different from that used for ordinary texting. The touch keyboard for the texting competition is designed to favor both left-handed and right-handed individuals. Each player selects a car representing his or her character in the race. The keyboard on the phone becomes the controller/joystick for the motor racing competition. Each time a player inputs a response into the keyboard, depending on the accuracy and speed of input response, both of which rely on good coordination skills, the car linked to that player will either move forward or will not move till the round where the player gets the correct response. The player whose car reaches the finish line first adjudicates victory.

The texting contest is designed in such a way to be compatible with both iPhone operating system and Android system smartphones manufactured by any major tech company.

This guarantees participation and accessibility regardless of finance, language, race, gender and age. The application is built to support participation of individuals with disabilities taking advantage of built-in features such as the screen reader. For instance, individuals with impaired sight will be able to activate on iPhones the VoiceOver feature, which speaks out the items present on the screen assisting them to navigate through the screen. Additionally, almost all smartphones come with a digital assistant and voice recognition that also allow voice to text recognition for potential individuals with disable limbs.

Text Racing: A Smartphone-Powered Path to Data Sovereignty

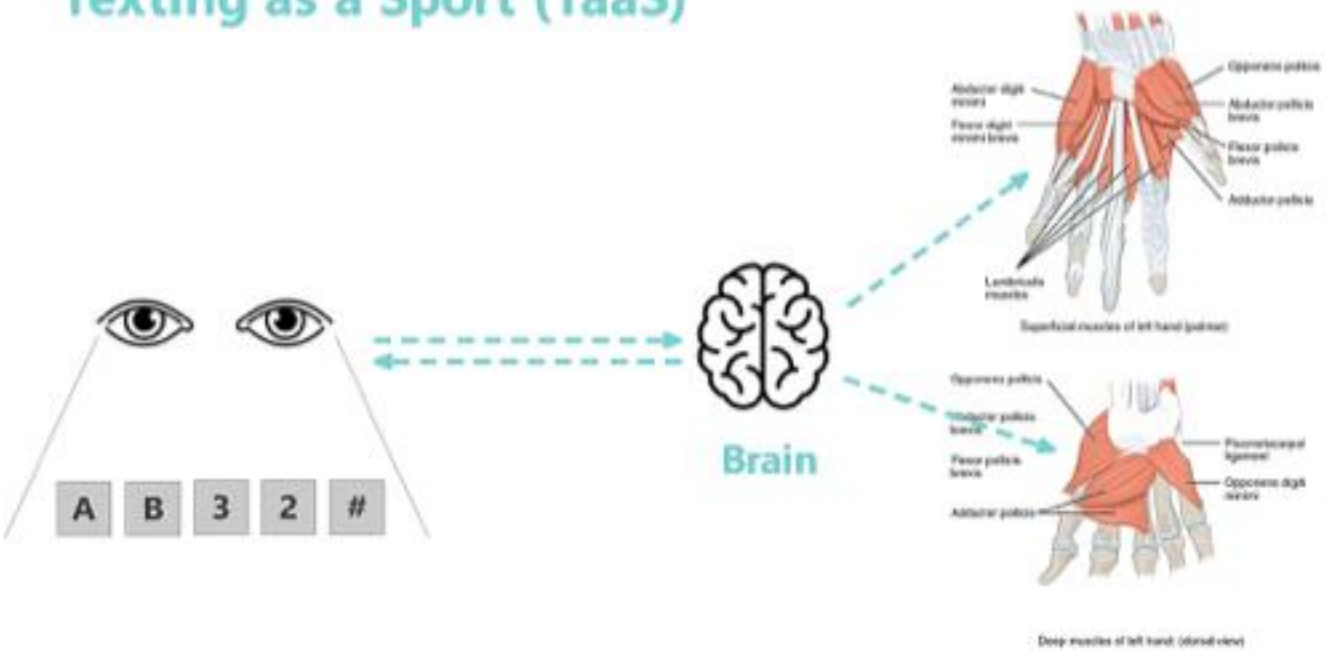
Text Racing transforms your smartphone into the chassis for a Bit Racer, enabling each impression created during competitive Text Races to be directly attributed to its creator. This unique model ensures that racers maintain visibility and ownership over the data they generate through their participation. By linking every action back to the individual, Text Racing exemplifies Data Sovereignty, empowering participants to engage in the digital economy with accountability, transparency, and control. This approach not only redefines competitive engagement but also reinforces the importance of data ownership in an increasingly interconnected world.



Primarily Motorized
(e.g. Formula One or powerboating)

Primarily Coordination
(e.g. billiards)

Texting as a Sport (TaaS)



4 Primarily Coordination

(e.g. billiards)

A challenge that texting as a sport imposes on contestants is the great demand of coordination between the eye and the hand or the auditory function of the ear and the hand. This depends on the physical ability of individual participants in question. Nevertheless, a great coordination skill measured according to one's accuracy and precision in performing a task, enables participants to have a better reaction time while engaging the described platform. In the eye-hand coordination, the inter-talk between the visual system, the brain, and the limbs is critical as it measures one's ability to 1) recognize and capture by sight a given information/instruction, 2) process that information stimulating the cognitive functions of the brain, and 3) react to the information (Figure 4). The same process applies as well to the hearing-hand coordination; where the inter-signaling between the auditory system, the brain and the limb is tested. As participants improve in their coordination skills, the intensity (or level) of tasks also increases with the objective to incite and excite participants to take on new challenges.

In proposing texting as a sport activity, we aim to create a fitness activity that engages both cognitive and physical abilities enhancing their functionality.

" A challenge that texting as a sport imposes on contestants is the great demand of coordination between the eye and the hand or the auditory function of the ear and the hand ".

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