



6D Helmets and Dynamic Research Win Grand Prize Award in Prestigious Head Health Challenge III

NFL, GE, Under Armour and the National Institute of Standards and Technology award \$500,000 to 6D Helmets and Dynamic Research Inc.

BREA, Calif. – Sept. 6, 2017 – With traumatic brain injury and concussions becoming a growing concern among amateur and professional athletes, the NFL and GE have collaborated with Under Armour and NIST and created the four-year, \$60 million [Head Health Initiative](#). Today, they announced awarding [6D Helmets](#) and [Dynamic Research](#) the Head Health Challenge III's \$500,000 grand prize for their work with 6D's proprietary Omni-Directional Suspension™ (ODS) technology.

“We’re thrilled to be named the winners of the Head Health Challenge III along with our project partners Dynamic Research Inc.,” said Bob Weber, CEO and co-founder of 6D Helmets LLC. “Together we worked to further develop Omni-Directional Suspension for application into multi-impact helmets. This award allows us to continue to refine our system for future helmet applications.”

Supported by the U.S. Commerce Department’s National Institute of Standards and Technology (NIST), the National Football League (NFL), GE (NYSE: GE), and Under Armour (NYSE:UA, UAA), the Head Health Challenge III’s mission is to spur the discovery, design, and development of advanced materials to better absorb or mitigate forces within helmets, pads, and other products used by athletes, first responders, military personnel, and others who face potential head impact injuries.

“The goal of the Challenge is to support innovation and help stimulate the marketplace with next-generation materials and design, and the impressive work by Dynamic Research and 6D Helmets has the potential to do just that,” said Jeff Miller, NFL executive vice president of Health and Safety Initiatives.

The Head Health Challenge III kicked off in early 2015 and attracted applications from more than 125 diverse companies and academic institutions. An independent panel of expert judges narrowed the list down to [five finalists](#), and each were awarded \$250,000 and a year of development time to enhance their materials while competing for the grand prize.

The Omni-Directional Suspension technology was originally developed by 6D beginning in 2011 and was sold commercially in its 2013 motorcycle and bicycle helmet lines. During the Head Health Challenge, 6D and Dynamic Research used advanced computer modeling, finite element analysis, and a series of iterative improvements to create a novel derivative of 6D’s ODS technology with an unusual geometric structure. The judges award decision was based on the new multi-impact material systems’ performance, potential commercial application and novel design. It reduced certain measures of impact by more than 70 percent when compared with baseline foam material commonly used in protective gear.



“The Challenge allowed us to exercise material testing and analysis that further unlocked the potential of our ODS technology,” said Robert Reisinger, director of engineering and co-founder of 6D Helmets. “Over the course of the challenge, we gained a greater understanding of its capabilities by individually tuning for both linear and rotational forces to reduce brain injuring accelerations. Some of these new features are already supported in our latest product offerings.”

NIST established a dedicated testing facility for the competition to provide a common measure of the materials’ performance. Each team submitted refined materials to NIST for testing at several points during the year, and NIST test data was provided back to them as feedback to modify their materials toward improved performance.

“The testing data collected by NIST researchers using this new measurement platform also helped the judges to fairly evaluate the diverse materials concepts developed by the finalists,” said Michael Fasolka, deputy director of the NIST Material Measurement Lab.

“I want to thank the NFL, GE, Under Armour, and NIST for sponsoring this challenge, and driving research,” concluded Weber. “The \$500,00 grand prize, which we share with Dynamic Research, will allow us both, and the industry as a whole, to move further in a positive direction to improve helmet performance and brain protection.”

For more information about the GE-NFL Head Health Initiative and Head Health Challenges, visit PlaySmartPlaySafe.com.

For more information about 6D Helmets and its products, go to 6dhelmets.com.

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About 6D Helmets

6D Helmets is dedicated to the relentless pursuit of brain protection for amateur and professional athletes. In engineering terms, the company’s name is derived from an object’s ability to move 3 dimensionally in space about the Cartesian coordinate system of X, Y, and Z, including rotation about each axis. In other words, Six Degrees of Freedom. The company’s patented Omni-Directional Suspension™ (ODS) is a multi-layered suspended liner system which reduces the transfer of angular acceleration and low-threshold energy to the brain providing unmatched protection and comfort. For more information, visit 6dhelmets.com.

About Dynamic Research

Dynamic Research, Inc. (DRI), specializes in applied research, development and consulting in the areas of vehicle dynamics and control, vehicle systems, human factors and ergonomics, restraints and protection systems, biomechanics, structural mechanics, simulator technology, and accidentology. DRI maintains large scale software systems to support simulation and analysis as well as special purpose experimental devices, including the Guided Soft Target (GST) test system, automatic vehicle controllers, specialized crash test dummies, and an ISO 17025 accredited impact test lab. To learn more about DRI, visit www.dynres.com.

About the National Football League

The National Football League has no higher priority than the health and safety of its players. In September 2016, Commissioner Roger Goodell launched *Play Smart. Play Safe.*—an initiative to drive

progress in the prevention, diagnosis and treatment of head injuries, enhance medical protocols and further improve the way the game is taught and played. As part of the initiative, the NFL and its 32 club owners pledged \$100 million to help spur independent medical research and engineering advancements. For more information about the initiative, please visit PlaySmartPlaySafe.com.

About GE

GE (NYSE: GE) is the world's Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the "GE Store," through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services, technology and scale, GE delivers better outcomes for customers by speaking the language of industry. www.ge.com

About Under Armour, Inc.

Under Armour (NYSE: UA, UAA), the originator of performance footwear, apparel and equipment, revolutionized how athletes across the world dress. Designed to make all athletes better, the brand's innovative products are sold worldwide to athletes at all levels. The Under Armour Connected Fitness™ platform powers the world's largest digital health and fitness community through a suite of applications: UA Record, MapMyFitness, Endomondo and MyFitnessPal. The Under Armour global headquarters is in Baltimore, Maryland. For further information, please visit the company's website at www.uabiz.com.

About NIST

As a non-regulatory agency of the U.S. Department of Commerce, NIST promotes U.S. innovation and industrial competitiveness by advancing measurement science, standards and technology in ways that enhance economic security and improve our quality of life. Founded in 1901, NIST is one of the nation's oldest physical science laboratories. Today, NIST measurements support technologies from the smallest nanoscale devices to the largest and most complex engineering systems. As part of Challenge III, NIST's measurement expertise in materials science was essential to identifying promising technologies, testing the winners' products under state-of-the-art laboratory conditions and providing technical guidance to the winners as they seek to improve their innovations. To learn more about NIST, visit www.nist.gov.

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