About Hothead Sports

Hothead Sports, *a division of Hothead Technologies™, Inc., is an Atlanta-based company founded in 2006 offering a patented and proprietary monitoring solution termed the Heat Observation Technology (H.O.T.) system. Using this early-detection technology, coaches and athletic trainers are able to prevent heat-related illness by monitoring every player's temperature from the sidelines.*

Defeat the Heat: The Story of Hothead Sports

On the afternoon of August 1, 2007, Jay Buckalew and his business partners, Rick Lane, Keith Sutton and Rodney Brown, sat at a booth inside a local Chick-Fil-A restaurant. But none of them ordered food. Instead they couldn't take their eyes off a helmet sitting in the back of Buckalew's pick-up truck parked outside. Inside the helmet was the first prototype of a revolutionary heat-monitoring device. A device that the Hothead team hoped would improve the safety of sports and save the lives of countless athletes.

This was the moment of truth.

From 150 feet away, a distance unheard of in temperature monitoring, the technology began sending data to a laptop computer on the table in front of them. Within a matter of seconds, the temperature on the screen rose from 85 degrees to 90 degrees to 94 degrees before coming to a standstill at 98 degrees. The team traded high fives and smiles. Their hard work had transformed a dream into a tangible, working product. Then they each ordered a number one with waffle fries.

The Vision

The dream actually started on a rooftop in 2004. Buckalew shook his head in disbelief as sweat dripped from his hard hat. As an 18-year veteran of the telecommunications industry, he had worked on his fair share of hot rooftops, but none compared to the sweltering heat he experienced while working as the Lead Technical Engineer on a wireless project in Puerto Rico. "I could be on the verge of a heat stroke right now and not even know it," he said to himself.

Lucky for him, that moment led to a different stroke – a stroke of genius.

A year later, Buckalew read that a Minnesota Vikings football player died from heat exhaustion and he remembered that day he was standing on the rooftop. “There has to be a way to monitor internal temperature to prevent these tragedies,” he thought. His mind had been conditioned to engineer solutions to problems and this situation was no different.

He threw several ideas around in his head before he got it. “I bet we could design a chip to insert in football helmets to monitor temperature and let others know if a player is about to overheat,” he said to himself.

Temperature Rising

The more Buckalew investigated, the more he realized the severity of the issue he faced. According to the National Center for Catastrophic Sport Injury Research, there were 117 heatstroke fatalities in football since 1955 in the United States. In fact, there were 5 deaths in 2006 alone. Their body temperatures rose so high and so fast that their bodies couldn’t keep up and regulate their core temperatures, and the boys died.

As Buckalew looked at the numbers, he felt a huge sense of urgency; he needed to act as fast as possible. But first he needed to find out if the idea was even feasible. He began looking for a partner to develop this technology and, based on recommendations from colleagues and industry insiders, sat down with representatives from Identec Solutions, an Austrian-based technology company specializing in long range Radio Frequency Identification (RFID).

During their first meeting, company representatives were hesitant. Buckalew explained that they’d need to shrink the tracking device to .5 ounces and monitor it with a small Personal Digital Assistant (PDA). At the time, Identec’s tracking device was about the size of a shoe box and was monitored by a huge computer. They weren’t sure it was possible. The company had used their RFID technology for an array of things, such as mobile asset management and monitoring the automobile assembly line process, but had never thought to include a temperature monitor and make the device small enough to track an individual.

After months of testing, Identec engineers confirmed what Buckalew’s gut had been telling him since that day in Puerto Rico. This vision could in fact become a reality. Identec quickly signed on to become a leading developmental partner and the technology’s first major investor.

The Game Plan

Sometimes more than faith grows from a Sunday morning church service. Buckalew felt horrible for brainstorming about his plans during the pastor’s sermon, but he had just returned from meetings with Identec and he was on a roll. The front of that Sunday’s church bulletin was covered in math equations. He figured out how the technology would penetrate cell phone signals within the stadium and the radio frequencies in which they’d operate. On the back he outlined a basic business model and finally gave this budding company a name: Hothead Sports.

The most crucial component of Buckalew’s game plan, however, couldn’t have been mapped out on a sheet of paper. The Hothead Sports team came together like pieces to a puzzle.

Buckalew met Keith Sutton through a mutual friend. Sutton had a background in marketing, branding and e-business through his work in the advertising and telecommunications industries. Sutton immediately captured Buckalew's vision and committed to building a powerful brand. Sutton then introduced Buckalew to Rodney Brown, a childhood friend who played high school football with him in the intense heat of their South Georgia hometown. Brown had 20 years of experience working on the design, engineering and integration of telecommunication systems. The team then met with Rick Lane, a local entrepreneur and former football player at the University of Georgia who coached and trained football players in the community. Lane knew that they'd need solid research to get their company off the ground, so he suggested they enlist the help of a well-known athletic trainer and former professor, Dr. Beth Higbie.

But Dr. Higbie, known for her research and clinical expertise as a certified athletic trainer, physical therapist and exercise physiologist, was hesitant. "If it's something I don't believe in, I won't be any part of it," she said in their first meeting. She didn't want her name used until she saw valid research, so she agreed to help them conduct the tests. Both of her sons were involved in youth football and she knew what technology like Hothead's would mean for their safety.

Buckalew couldn't have scripted it better. And they all agreed to come on board under less than stable conditions. Hothead had no income, which meant there was no payroll. The team invested their sweat into the company, borrowed money to rent space in a strip mall in Tyrone, Ga. and crossed their fingers that the technology would be a success.

Turn Up the Heat

Prior to the development of the Heat Observation Technology (H.O.T.) system, there were several ways to monitor the temperature of an athlete during a workout. However, even the most commonly used products – liquid crystal stickers and ingestible pills – were unappealing. The liquid crystal sticker was affixed to an athlete's forehead to monitor temperature, but readings were often inaccurate because they would slip off and were influenced by skin temperature and evaporating sweat. A more recognized product was the ingestible pill thermometer. The readings were accurate, but the pill was very large and often hard to swallow and could only be administered to select athletes due to a variety of contraindications. Of course, monitoring rectal temperature was considered the "gold standard," but it was very invasive and, especially in athletics, impractical. In each case, certified athletic trainers had to be so close to athletes to read their temperature that there was no way to monitor athletes on the field from the sidelines.

As momentum grew, the team decided to start talking about the product and showcasing it at numerous athletic conventions. At every one, the H.O.T. system was met with enthusiasm because it tackled all the concerns coaches and certified trainers had. The dime-size device is integrated into an athlete's helmet where it tracks the temperature trends of players on the field. That data is then wirelessly sent to a PDA where it can be monitored in real-time. In the event a player's temperature rises above normal, an audible alert is set off to warn a coach or certified athletic trainer that the player should be evaluated and cooled down. At less than $100 per player per season, it's also very inexpensive compared to its counterparts. Since the system is based on

forehead temperature, developers harnessed the power of General Electric (GE) to design a non-invasive encapsulate that isolated the sensor from elements that had interfered with readings in other devices. It kept the reading accurate by protecting it from sweat and wind which could cool it down.

When the first prototype of the H.O.T. system was delivered in August 2007, the team laughed that their Chick-Fil-A "research" probably wouldn't make the cut and accompanied Dr. Higbie to University of Georgia. A certified athletic trainer there told them that they would need to test the system's validity against core temperature. So that's exactly what they set out to do.

The smallest room at the Hothead headquarters was converted into a makeshift "heat room" and the Hothead group ran an advertisement looking for volunteers to help them test the system. Much to the team's surprise, football players ranging from middle-school to Division I all-stars came in droves to volunteer. They wanted to find out exactly how hot they were getting during football practice and games. Each swallowed the ingestible thermometer, threw on a H.O.T. system equipped helmet and took turns running on a treadmill. All the while, 11 heat lamps kept the room at an uncomfortable 90 degrees. Dr. Higbie and several other researchers and medical staff watched closely and monitored the athletes' temperatures from a nearby laptop.

By the end of the sixth week, Dr. Higbie's preliminary tests had confirmed what her gut had been telling her all along. Readings from the H.O.T. system correlated with the readings from the ingestible thermometer. But she also knew that "in-house" testing alone was not sufficient proof for the medical community. She contacted a certified athletic trainer and research colleague at Kennesaw State University, Dr. Laurie Tis, PhD, ATC, FACSM, Associate Dean in the Wellstar College of Health and Human Services at Kennesaw State University, to see if KSU would be interested in conducting research to validate the H.O.T. system and compare it to the research on rectal core temperature.

Ironically, Dr. Tis had met Buckalew at the National Athletic Trainers' Association (NATA) conference in Los Angeles several years earlier and had provided helpful feedback on the H.O.T. system. She believed in the concept, but stressed the importance of research. Little did she know, the project would eventually land in her lap. Faculty at the college enthusiastically accepted the challenge and began testing.

Adding Fuel to the Fire

On the night of March 15, 2008, Robert Erb, CEO of the world's largest helmet distributer Schutt Sports, worked late to research a topic that concerned him – heat exhaustion in sports. As he "googled" the issue, his search terms were "heat" and "helmets."

Several states away, a few members of the Hothead team were also working late searching for ways to grow their fledgling company. The H.O.T. System was still in its developmental stages and the financial well was running dry. In order for them to grow, they would need to find a way to mass distribute the technology.

When the office phone rang at 9 p.m., Buckalew answered, wondering who would call the office so late. It was Robert Erb. “Excuse me,” he asked the voice on the other end, “who did you say this was?”

At first, Buckalew thought it was a joke. Then he remembered that they had just signed up to advertise on Google.com. Their ad ran during prime business hours to start, but finances had forced them to switch to a cheaper slot - from 7 pm to midnight. The Hothead website had popped up front and center on Erb’s computer screen.

Erb went on to explain that even before his time at Schutt, he had always been intrigued by designing a cooler helmet. He was sure someone had already developed the technology and hoped Hothead was his answer. Buckalew sent test documents, proof of business partnerships and other paperwork. Erb immediately arranged a flight to Atlanta and, after six hours in the Hothead conference room, Hothead and Schutt walked away with exactly what each of them needed - a partner to take their product to the next level.

The H.O.T. System, in the process of being validated by KSU researchers, will be available to all Schutt clients purchasing a new or refurbished football helmet beginning in fall 2009. Ultimately, Hothead plans to support all sports and any additional markets in need of biosensor technologies, such as military, public safety, HAZMAT, Industrial, Utility and Mining.

HotHead Technologies Management Team Biographies

- **Jason E. Buckalew, CEO/Founder**

As founder, CEO, and chairman of HotHead Technologies, Inc, Mr. Buckalew plays a critical role in driving the strategic vision of the company and in managing key customer relationships.

Mr. Buckalew brings over 20 years of experience from the Networking and Telecommunications industry to HotHead Technologies, Inc. Prior to founding HotHead Technologies, Inc, Mr. Buckalew was Director of Sales at Extricom International where he was responsible for development of their channel sales program, channel strategy and business development.

Prior to his tenure at Extricom, Mr. Buckalew was co-founder of Systems & Solutions and played a lead role in driving Sales & Development during the company's acquisition by Dell Computer. As part of a business development and acquisitions team, Mr. Buckalew helped to shape many of the key business initiatives and acquisitions in both the enterprise and carrier lines of business. Mr. Buckalew also led the design and execution of the channel market strategy at Waters Network Systems, a startup which has become an industry-recognized leader in Fiber Optic Ethernet Technology. Mr. Buckalew is a graduate of Gwinnett Technical College.

- **Jack Torgow, COO/Founder**

Jack Torgow is co-founder of HotHead Technologies, Inc where he leads the organization as Chief Operating Officer. With more than 25 years of internetworking experience, Mr. Torgow's role is to oversee the core vendor and supply chain channels for HotHead Technologies which include hardware, software and distribution. Mr.Torgow is also a key asset in building enterprise-level relationships for current and future HotHead Technologies endeavors.

Mr. Torgow is currently the Regional Sales Manager for a five-year-old start-up company in the Wireless Intrusion Prevention Systems (WIPS) space with responsibility for all "go to market" sales campaigns for AirTight Networks products. He has also held the position of Manager of Channel Operations for Cisco Systems. At Lucent Technologies, Mr. Torgow held the position of Vice President of Sales for the Southeast Region for Data Networking Technology focused on service provider and enterprise-wide voice, video, wireless and data applications. Mr. Torgow is a graduate of CCNY at Lehman and completed his post graduate work at Columbia University in New York City.

- **Richard (Rick) P. Lane, Vice President - Business Development**

As Vice President-Business Development, Rick Lane is responsible for the daily sales and business operations of HotHead Technologies. The depth of his expertise – a culmination of nearly a decade in sales, operations management, public relations and event management – is a valuable asset to HotHead Technologies.

Mr. Lane also has more than 18 years of experience in the sports and health industry and is a former University of Georgia Football Scholarship athlete. In 2000, Mr. Lane was recognized worldwide for the concepts he developed while serving as the Administrator at International Park, the site of the 1996 Olympic Volleyball events. He managed nearly 200 employees and solidified major sponsorships with companies like Coca-Cola, Speedo and Hawaiian Tropic.

Mr. Lane earned a Bachelor of Business Administration (Marketing) and an Associate of Arts in Advertising from Clayton State University.

- **Keith L. Sutton, Vice President - Corporate Marketing & Branding**

Keith Sutton has more than 20 years of experience in the advertising, marketing, and creative arena. As Vice President - Corporate Marketing and Branding, he is charged with establishing the HotHead Technologies brand and leading all marketing and creative strategies to propel the H.O.T. system product into the hands of customers.

Mr. Sutton has been instrumental in attaining and overseeing major web services accounts for Russell Athletic, Jerzees, and Coldwater Creek. While at Cadmus Creative Marketing, Mr. Sutton developed "Inbox Marketware," an eMarketing solution for retailers and manufacturers. Mr. Sutton had dual roles at Cadmus that included managing the Information Technology team responsible for all corporate technology as well as major asset management of data for retail and manufacturing clients like Bloomingdales, Russell Athletic, Jerzees, Augusta Sportswear Manufacturing and more.

Prior to Cadmus, Mr. Sutton had an 11 year career with BellSouth Advertising and Publishing as a Sales Promotion Manager and Manager of Intranet and Interactive Media for the BellSouth's Advertising Design Services division, supporting 1,500 sales representatives across the nine-state BellSouth region.

Mr. Sutton graduated with a Bachelor's degree in Advertising Design from Georgia Southwestern University. He also holds an E-Business Strategy certification from Georgia Institute of Technology.

- **Rodney Brown, Vice President – Information Systems**

As Vice President - Information Systems, Rodney Brown is an integral part of a team positioning the H.O.T. System to become a leader in the sports technology market. Mr. Brown’s responsibilities include Technology Planning and Strategy, as well as New Product Innovations. He oversees technical and IS operations for the company.

Mr. Brown has worked in the Information Technology sector for nearly 20 years. He has excelled in every position he has held, including his most recent appointment as IT Manager –

Strategic Technologies, AT&T Mobility (formerly Cingular Wireless). Mr. Brown's primary responsibilities were to manage Cingular's Network Architecture and Strategic Technologies teams.

Mr. Brown has served as a Principal Member of the Consulting Staff at Lucent Technologies where he focused on network design, engineering, integration and business services for service providers and large enterprise customers. Previously, Mr. Brown worked in systems engineering roles at Honeywell, CompuCom Systems, and Econocom Network Services.

He is also a U.S. Navy veteran, serving as a supervisor over operations and maintenance of encrypted voice and data systems including ship/shore communications networks. Mr. Brown graduated with a Bachelors degree in Technical Management (magna cum laude) and Associate of Applied Science in Electronics (honors) from DeVry University.

Research Staff

- **Dr. Elizabeth (Beth) Johnson Higbie, PT, PhD, ATC, LAT**
  Senior Director of Research and Sports Science

Dr. Beth Higbie leads the HotHead Technologies Research and Trials department for the H.O.T. system. Touting more than 25 years of experience in sports science, Dr. Higbie has become one of the most respected and knowledgeable researchers in her field.

Dr. Higbie spent more than five years at the University of Georgia as a student athletic trainer, consultant and instructor of exercise science. She also taught physical therapy and athletic training for 11 years at Georgia State University.

Her management, teaching, research, and written publications are numerous and define her importance to the team at HotHead Sports. For an exhaustive list of Dr. Higbie's credentials, please visit the HotHead website.

Professional Certifications and Licenses
Georgia Physical Therapy License #1955
Georgia Athletic Trainer License #275
Athletic Trainer Certification #119202477
Education
Ph.D., Exercise Science, The University of Georgia , Department of Exercise Science, Athens , Georgia , 1994.
M.S., Physical Therapy, The University of Alabama at Birmingham, Division of Physical Therapy, Birmingham, Alabama, 1984.
B.S., Interdisciplinary Studies (Biology/Psychology), The University of Alabama , New College, Tuscaloosa , Alabama , 1981.

FREQUENTLY ASKED QUESTIONS
GENERAL SYSTEM QUESTIONS

What is Hothead?
Hothead Technologies is a RFID technology company that uses wireless technology to transmit body measurements such as temperature. Currently, Hothead offers body temperature surveillance, and is working to develop additional capabilities like G-force, heart rate, oxygen saturation, and others.

What is RFID?
RFID is Radio Frequency Identification Device---a short way of saying, a device that transmits information through radio waves.

What is the Hothead System comprised of?
The Heat Observation Technology (H.O.T.™) System is comprised of two pieces of equipment, and several software systems and programs. The "tag" consists of a printed circuit board (PCB), a battery, a sensor lead wire, and a sensor---all of which are inserted into a piece of headgear. The other piece of equipment is the personal data assistant (PDA). The PDA contains a card that holds the H.O.T.™ System software necessary to operate the PDA in conjunction with the sensors and software. The PDA has a cradle that charges it and uploads data to a computer that holds the H.O.T.™ System main software. The H.O.T.™ System software can be kept on most computers, is Windows® based, and is the main way to build and update your "roster" of personnel and to print reports.

What does the Hothead System measure?
The Heat Observation Technology (H.O.T.™ System) measures the temperature of a person at the temporal artery, just above the eyebrow and on the side of the face where it meets the forehead. The H.O.T.™ System does not measure the "core body temperature." However, Hothead has conducted many tests to determine the correlation between temporal artery temperature and rectal temperature (the standard for core body), and the system translates the temporal artery temperature to estimate the core body temperature.

Shouldn't it measure core body temperature?
The only way to get true core body temperature is to invade the body---either through the mouth or the rectum. We believe that people will be more comfortable without either of those measurements taking place while they are competing or working----and they can't be monitored remotely.

Aren't there monitoring systems that measure core body temperature?
Rectal thermometers are the "gold standard" for determining core body temperature. There is an item called the HQ pill. It is a very large "electronic thermometer" that must be ingested by a person several hours before exertion, is readable only within inches of the person, and costs about $30-$40 per person per event (for a player who does 4 weeks of 5 days of training, and then 2 months of hot weather practices and games, the cost per person per season is over $2,000 for the pills, not including the reader device). It is a good product for measuring core body temperature, and might be appropriate for an individual who has been identified as having a heat stress problem. However, the cost, and the inability to remotely monitor the readings, prohibit its use as a monitor for a group of people.

What's the difference between temporal artery and core body temperature?
There is an established physiological relationship between skin temperature (forehead temperature) and core temperature. Forehead temperature is used by the medical community and is certainly very practical for the purposes of early identification of overheating. By placing the sensor in the headgear, the individuals who are monitored don't have to do anything more than they usually do—just put on their helmet. In fact, they don't even need to turn on the system---it's always on for them. The only person who needs to activate the system is the supervisor, and he does so by turning on the PDA.

Can the Hothead system monitor anything other than body temperature?
We are currently working to add several more sensors to the H.O.T.™ System, and expect that we will soon have the ability to measure heart rate, oxygen saturation, and the g-force of an impact (for assessing concussions). Of course, we expect that we'll develop some other capabilities that we don't know yet. So, the system we built is capable of receiving and transmitting information from a number of different sensors.

Won't the ambient temperature affect the temperature reading?
No, the only temperature that the sensor will measure is the temperature of the skin that it is touching. However, when the headgear is not being worn, the sensor reading will. The System will take a minute or two to get up to the correct temperature, and after that it will begin to report accurate temperatures again.

PLEASE NOTE: THE SYSTEM WILL NOT REPORT BODY TEMPERATURES IF THE USER IS NOT WEARING HEADGEAR CONTAINING THE H.O.T.™ SYSTEM TAG!

At what temperature does the System signal that a player should be checked for overheating?
It is user-selectable. We will work with your organization to set the threshold for the "alert temperature" for your use and application. In general, the temperature for heat exhaustion is between 98.6° and 104° Fahrenheit. Heat stroke occurs at any core temperature above 104° Fahrenheit. We generally recommend that you set a threshold temperature of 102.5° F.

Has the system been tested in real-life situations?
Of course, we wouldn't put it in the market until it was fully tested. We conducted in-house laboratory tests, had a full independent study conducted by Kennesaw State University, have field tested it with several division I colleges such as Penn State, Texas, Ole Miss, TCU and South Florida. Further, the University of Florida Gators put our system to the test during its 2010 spring drills, and gave it a Perfect 10. Additionally, for our firefighter and safety applications, we have been testing with fire units in live burn situations.

How many sensors can be monitored simultaneously?
Up to one thousand (1,000) tags can be monitored by a PDA, so if you have several teams in your organization (school or league), you should consider saving money by obtaining only one PDA for all of the teams / players. Please call us to discuss the specific circumstances in your situation so we can explore the best system and pricing for you.

How far can one be from the PDA and still be monitored by it?
We warranty that the System will measure up to 300 yards. It has been known to do better than that, but distance beyond 300 yards will depend on various circumstances.

Will I feel the sensor against my forehead?
Probably not. We try to use materials similar to those that are in your headgear sweatband or forehead padding. The sensor is very tiny. We haven't had any complaints yet.

Can the tag be used with any type of headgear?
The H.O.T.™ system tags can be purchased "embedded" in helmets from Schutt Sports, Inc., or fitted into any helmet on the market, from football helmets by Schutt or others, to fire helmets, hardhats, or any helmet that makes sufficient contact with the temporal artery area. Hothead also offers headbands into which the tags can be inserted and worn alone or under/inside a helmet.

Is there a risk of illness or cancer from the radio transmissions so close to my head (as has been reported with cell phones)?
No, as the transmission power of the System is about 1/100th of a cell phone.

Why did you choose Kennesaw State University to test the technology?
The Wellstar College of Health and Human Services at Kennesaw State University has a strong reputation for conducting studies designed to benefit the community. The H.O.T.™ System is also designed to benefit the all of us, therefore, our missions are highly compatible. In addition, Dr. Laurie Tis, PhD, ATC, FACSM, Associate Dean for the Wellstar College of Health and Human Services, is a nationally recognized scholar and certified athletic trainer. We knew her expertise would be critical to the success and acceptance of the project.

HOW TO USE THE SYSTEM
Who is responsible for monitoring the PDA and removing athletes from play?
Your organization decides who should monitor the equipment and who should make the decisions about removing and returning people to work or play. When the PDA alerts that a person has exceeded the threshold temperature, the supervisor must acknowledge that alert and change that person's "status" to turn off the alarm. The monitor can "remove from work/play" or "send to medical" or other actions. Either way, the PDA tracks, records and time-stamps the actions.

Does a coach really need technology to know when a person is overheating?
Yes. Many times athletes and workers will push themselves until they are in a heat stress zone and not tell their supervisor or coach in fear of losing a position, work hours, or raising questions about his ability to perform. Heat exhaustion and heat stroke will cause a number of symptoms, from short term to long term health problems. The H.O.T.™ System is designed to give an "early" warning system so that people don't suffer any of the problems of overheating----this may require a short term removal from play or work, but will eliminate days or weeks of inability to perform.

What information do I get from using the System?
While using the System the person assigned to monitor the PDA can determine the status—Good, Attention, Alert----of each individual user. Further, he can observe the real-time temperature of each user. If a user's temperature exceeds a pre-set threshold temperature, the PDA will audibly and visually signal an alert, specifically identifying the individual who is on the verge of overheating. After any session, the data from the PDA can be uploaded to a computer and used to print reports showing peak temperatures, trends, and other helpful information.

SYSTEM SPECIFICATIONS
What type of software system does the PDA use?
The PDA is a Windows® based system, so the user screens are operate in a computer environment with which the users are familiar. All of the operations are touch-screen operable with a stylus or finger. The actual H.O.T.™ System software is proprietary.

How is the H.O.T.™ System powered?
The tag has a lithium battery incorporated in it. The battery will operate for as long as the license for use of the System.

Is this a weather-proof device?
Technology developers reached out to General Electric, and together designed a non-invasive encapsulate that isolates the sensor from any element that could interfere with readings, including rain, sweat, exterior heat and wind.

What are the special hardware requirements of the receiving unit?
The receiving unit, our proprietary PDA device loaded with the H.O.T.™ System software, is "plug and play." It comes with a cradle to recharge the battery, download periodic updates for the software system, and upload data for use with the computer-based software system.

COST OF THE SYSTEM
How much does the system cost?
The total cost will depend on the type of application, and the total system requirements, you desire to obtain. Please call or email us for a quote to discuss your application requirements and a quote.

Can I purchase the H.O.T.™ System? And how long does it last?
Typically, Hothead Technologies will sell the tags and PDA to you, and license the software system for a period of time, usually one or two years. If you decide to renew your license, you will have to order new tags, with or without additional capabilities, and enter into a new license agreement. You may choose to purchase a new PDA at that time too, but it likely will not be necessary, as you can upload the current version of the software.

Can I get an insurance coverage reduction for using the H.O.T. ™ System?
We have not learned of any insurance companies that have agreed to do so, but it certainly is worth asking your provider because your organization is taking active measures to reduce the risk to its students/players of heat illness and death.

Who pays for the H.O.T.™ System for my son's football team? Whom do I contact at my school system to tell them we want the H.O.T.™ System?
We highly recommend that you undertake a joint effort between your school risk management team (may be at the district or higher level), the school principal, Athletic Director, team Coach, and the Booster Club. Though school budgets have been slashed almost everywhere, this device is designed to reduce liability risks for the schools, and for that reason could lead to reduced insurance rates. Further, we suggest some creative solutions to financing, such as splitting costs between the school, the Booster Club, and the players' parents. For example, the school could pay the cost of the PDA and software license, and the Booster Club and parents could pay the cost of the individual helmet sensors.

TECHNICAL SUPPORT

What if the wire becomes disconnected or cut between the sensor patch to the rubber-coated electronic component?

The hard-wired portion of the H.O.T.™ System, from a sensor to the "tag," requires a wire---so if it is disconnected for any reason, you will have to replace it. We do take care to prevent them from being ripped from the "tag" housing by wrapping it around an "anchor" before feeding it out of the "tag".

Can I re-attach the sensor if it is removed from the helmet?

You can remove the entire "tag," the rubber coated piece with the printed circuit board, battery, wire and sensor. You can reattach it to another piece of headgear if you like. However, if you do so, you must ensure that the sensor is secured to the headgear in the proper location and securely enough to stay attached.

Can I repair the components inside the rubber-coated casing?

No. The rubber casing is intended to be permanently sealed. This ensures that the "tag" keeps its waterproof ability, and that the components work as they are supposed to work. Opening the rubber casing will void all warranties, tech support, and assistance.

Can I remove and replace the battery in the "tag"?

No. Doing so will void all warranties, tech support, and assistance. Additionally, you couldn't reconnect and attach the unit properly.

Whom do I call if I have problems with the H.O.T.™ System?

Call Hothead Technologies at the Technical Help Line. Check the website at www.hotheadtechnologies.com for the number.

HotHead Sports Timeline

July 2004
Technology conceptualized when Jay Buckalew, engineer for global wireless corporation, overheats on worksite in San Juan, PR

August 2005
News of local and professional athletes' simultaneous heat injuries prompts Buckalew to act on concept

December 2005
First meeting with Identec engineers to develop technology

July 2006
RFID AG signs agreement to become first major investor

September 2006
Founding team formed when Buckalew shares concept and vision for Heat Observation Technology (H.O.T.) with several colleagues

November 2006
HotHead Sports officially becomes a business entity

December 2006
HotHead Sports builds strategic partnerships with Identec Solutions and DBK Concepts.

January 2007
H.O.T. System makes its debut at American Football Coaches Association (AFCA) conference and is met with overwhelmingly positive response

March 2007
HotHead Sports builds strategic partnerships with GE to complete development of heat-sensing component

June 2007
H.O.T. System concept met with positive response at National Athletic Trainers Association (NATA) conference – prompts more testing

August 2007
HotHead Sports completes a year-long campaign across the country to share the H.O.T. system concept and build brand awareness among coaches, certified athletic trainers, athletic directors and parents.

August 2007
First prototype of system delivered

January 2008
HotHead Sports becomes a corporation – subsidiary of holding company HotHead Technologies

March 2008
The world's leading manufacturer of football helmets, Schutt Sports, expresses interest in partnership with HotHead Sports

June-August 2008
Research team, led by Executive Director of Research and Sports Science, Dr. Beth Higbie PhD, PT, ATC, LAT**,** tests accuracy and functionality of technology in heat room at HotHead Sports headquarters

August 2008
HotHead tests the H.O.T. System to further confirm technology's validity

October 2008
HotHead Sports, along with Schutt Sports, implements first NCAA Division I H.O.T. System testing at a Penn State University football practice

November 2008
Kennesaw State University begins human subjects research correlating forehead temperature (measured using H.O.T. System) to rectal core temperature

January 2009
Product officially debuted to nearly 6,000 coaches at American Football Coaches Association (AFCA) Convention

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HotHead Technologies Working with Schutt Sports to Develop "Smart" Helmet

Schutt Sports, the world's leading provider of football helmets and faceguards, is taking safety to the next level through their association with one of the most innovative sports technology companies in America.

Nashville, Tenn. – January 12, 2009 – HotHead Technologies, Inc., an Atlanta-based enterprise committed to improving athletic safety through research-based technology, today announced it is working closely with Schutt Sports to develop a commercially viable heat-sensing helmet insert, which can detect potential heat stroke in a player in real-time. News of their joint development activities was officially announced at the American Football Coaches Association Annual Convention hosted by the Gaylord Opryland Hotel.

"From the moment we began researching a way to prevent non-fatal and fatal injuries due to heatstroke, it has been our hope that the technology would find mass distribution through a relationship like this," said HotHead CEO Jay Buckalew. "Placement of the Heat Observation Technology (H.O.T.)™ System in Schutt helmets will have a significant impact on the lives of these athletes."

Developers at HotHead have spent years perfecting a dime-sized sensor that is expected to be implanted in the forehead pad of new and refurbished Schutt football helmets beginning this fall. The sensor will track the temperature trends of players on the field and send that data to a PDA (Personal Digital Assistant) on the sidelines where it can be monitored in real-time. In the event a player's temperature rises above normal, an audible alert is set off to warn a coach or certified athletic trainer that the player should be evaluated and cooled down.

While concussions and head injuries remain the most highly publicized injuries for football players, heat stroke and other heat-related problems are a very real threat to athletes and can be even more serious than other injuries.

"Yesterday's helmets were designed to simply protect players from head injuries," said Schutt CEO Robert Erb. "Our association with HotHead Sports is part of our long-range effort to build "smart" helmets which protect the player as a whole. Thanks to the ground-breaking H.O.T.™System, we hope to help coaches and athletic trainers take the guesswork out of whether or not a player is overheating."

According to USA Football, more than 21 million Americans - from pee wee to the NFL - will play football this year. Overheating, especially among programs in the South, is an area of long-time concern for coaches, parents, certified athletic trainers and administration. Until now, they have never been able to accurately monitor the true temperature of an athlete on the field.

About HotHead Sports
HotHead Sports, a division of HotHead Technologies, Inc., is an Atlanta-based company offering a patent-pending and proprietary monitoring solution termed the Heat Observation Technology (H.O.T.)™ system. The system is designed as an aid in the prevention of heat-related illness in athletes. Within the coming years, HotHead Technologies will target additional segments that have a need for biosensor technologies such as public

safety, military, industrial, and other markets. “HotHead “, “HotHead Sports”, Heat Observation Technology (H.O.T) and the HotHead Sports logo are trademarks of HotHead Technologies, Inc.

About Schutt Sports
Schutt Sports is the world’s #1 maker of football helmets and faceguards and is the first helmet maker to move its technology beyond traditional foam padding. SKYDEX2® TPU Cushioning is available in the ION4D, AiR XP and DNA Pro+ lines, absorbing as much as 55% more force from impact in game-like conditions. Nearly 60% of the helmets and 80% of the faceguards around the world, from the pros to the pee wees, are made by Schutt Sports. Schutt Sports is also the Official Base Supplier to Major League Baseball®. The USA Olympic Softball Team has won three gold medals and one silver medal wearing batter’s helmets from Schutt Sports.

For over 90 years, we’ve designed our gear with the singular purpose of empowering athletes to perform at the top of their game.

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