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GeckoSystems Adapts Microsoft's Kinect to Enhance Mobile Robot Self-Navigation

CONYERS, GA--(Marketwire - January 18, 2011) - GeckoSystems Intl. Corp. (PINKSHEETS: GOSY) announced today that their recent invention of the GeckoImager™ incorporates Microsoft's Kinect sensor. GeckoSystems is a dynamic leader in the emerging mobile robotics industry revolutionizing their development and usage with "Mobile Robot Solutions for Safety, Security and Service™."

"Even though we are in very delicate and sensitive discussions with various Microsoft representatives, nonetheless due to the founder of Microsoft, Bill Gates' article, 'A Robot in Every Home' (http://www.scientificamerican.com/article.cfm?id=a-robot-in-every-home), gives us basis for belief that their interest is not cursory and simply polite. Microsoft has invested many man-years creating their mobile robot software development environment, entitled Microsoft® Robotics Developer Studio 2008 R3. Microsoft RDS is a Windows®-based environment for academic, hobbyist, and commercial developers to easily create robotics applications across a wide variety of hardware. To date, no publications reveal any viable automatic self-navigation AI software having been developed in their RDS environment," stated Martin Spencer, President/CEO, GeckoSystems.

In a recent Nextgov.com article, "Gates: Robots are next hot health technology," (http://ht.ly/37XrJ) he is quoted as saying: "Advances in robotics will greatly enhance health care delivery over the next decade." The computer is "learning to see, it's learning to talk, it's learning to listen . . . and it's learning to move around," he said, predicting that ambulatory machines would be relatively cheap in about five years. "The dexterity things are maybe five years behind." The comments came at a conference to showcase advances in mHealth, or mobile health, organized by the National Institutes of Health, the independent nonprofit Foundation for NIH and the mHealth Alliance.

Microsoft recently announced that over 8 million Kinect sensors were sold within 60 days of its launch in November 2010, making 2010 the biggest year in Xbox history. Microsoft sold around 1.9 million Xbox 360 consoles in December 2010 alone, according to NPD, a market research company.

GeckoSystems' recently announced GeckoImager uses sensor fusion interpolates structured light machine vision data from the Kinect sensor with sonar range finding data , complimented by GeckoOrient's™ solid-state compass,

accelerometer, and odometry sensor fusion. This provides their automatic, self-navigation AI software, GeckoNav™, with sufficient and timely data to achieve actionable situation awareness resulting in a very safe, loose crowd level of mobile robot autonomy that is "collision proof."

"The amount of data that the new GeckoImager -- using Microsoft's Kinect sensor -- provides is far greater then what can reasonably be collected with fixed sensors and at a much lower cost than scanning laser range finding systems that are frequently used. Our new GeckoImager sensor fusion system not only provides timely and actionable situation awareness information sufficient for our AI navigation software, GeckoNav, but also satisfies those requirements at a much lower cost, in both dollars and power," stated Kevin O'Connor, Sr. EE Roboticist, Research and Development, GeckoSystems.

Machine vision is a combination of structured lighting, a detector, and a computer to precisely gather and analyze data. Scanning the object with the light constructs 3-D information about the shape of the object. This is the basic principle behind depth perception for machines, or 3D machine vision. In this case, structured lighting is sometimes described as active triangulation.

Structured light is the projection of a light pattern (plane, grid, or more complex shape) at a known angle onto an object. Although other types of light can be used for structured lighting, laser light is the best choice when precision and reliability are important. This technique can be very useful for imaging and acquiring dimensional information. Fanning out a light beam into a sheet-of-light generates the most often used light pattern. When a sheet-of-light intersects with an object, a bright line of light can be seen on the surface of the object. By viewing this line of light from an angle, the observed distortions in the line can be translated into height and/or distance variations.

This fundamental technological approach has many applications in mobile service robots. Heretofore, cost, size and complexity of set up has been prohibitive. Microsoft's recent contribution to the advancement of low cost, truly utilitarian personal robots advances their founder's timeline notably and takes their new product far beyond only the living room.

Service robots can be used to provide domestic aid for the elderly and disabled, serving various functions ranging from cleaning to entertainment to remote monitoring. The high cost of labor in developed countries and the increasing need for assisted living has led to the development of the service robotics market. As service robots are in greater proximity to humans, the technology involves more safety concerns over human-machine interaction. However, developments in the manufacture of intelligent and safer robots by GeckoSystems address the issues of safety, manipulation, and sensing. Thus, GeckoSystems is well prepared for the

day when every home will have a robot.

"This breakthrough usage of Microsoft's low cost Kinect range finding sensor system may enable some near term business-to-business niche retrofit markets for us. We continue to expect technology-licensing revenues to precede revenues from product manufacturing and sales and have two to three prospective licensees in active discussions. This augurs well for increased ROI and shareholder value for our nearly 1400 investors," concluded Spencer.

Other online articles:

"Cyber Care: Will Robots Help the Elderly Live at Home Longer?" - June 21, 2010 By Brian T. Horowitz http://www.scientificamerican.com/article.cfm?id=robot-elder-care

"Tireless Caregiver For The Homebound: A Robot" - Dec. 26, 2009 By Michael D. Shaw http://www.healthnewsdigest.com/news/Family_Health_210/Tireless_Caregiver_For_The_Homebound_A_Robot.shtml

"GeckoSystems Intl. (GOSY.PK) will be first to mass produce personal home care robot" - Dec. 10, 2009By M.E.Garza http://biomedreports.com/2009121021692/geckosystems-intl-gckopk-will-be-first-to-mass-produce-personal-home-care-robot.html#ixzz14zOiu5Ig

"The Robots Have Dawned: Meet The CareBot™" - June 28, 2009 By Ira Rosofsky, PhD http://www.psychologytoday.com/blog/adventures-in-old-age/200906/the-robots-have-dawned-meet-the-carebot

"Personal Robots to Monitor Elderly Vital Signs" - June 16, 2009 By C. G. Masi http://cgmasi.com/eyeontechnology/2009/06/personal-robots-to-monitor-elderly-vital-signs.html

About GeckoSystems International Corporation:

About the CareBot:

Like an automobile, mobile robots are made from steel, aluminum, plastic, and electronics, but with ten to twenty times the amount of software running. The CareBot has an aluminum frame, plastic shroud, two independently driven wheels, multiple sensor systems, microprocessors and several onboard computers connected in a local area network (LAN). The microprocessors directly interact with the sensor systems and transmit data to the onboard computers. The onboard computers each run independent, highly specialized cooperative/subsumptive artificial intelligence (AI) software programs, GeckoSavants, which interact to complete tasks in a timely, intelligent and common sense manner. GeckoSuper, GeckoNav, GeckoChat, GeckoScheduler and

GeckoTrak are primary, high level GeckoSavants. GeckoNav is responsible for maneuvering, avoiding dynamic and/or static obstacles, seeking waypoints and patrolling. GeckoChat is responsible for interaction with the care-receiver such as answering questions, assisting with daily routines and reminders, and responding to other verbal commands. GeckoTrak, which is mostly transparent to the user, enables the CareBot to maintain proximity to the care-receiver using sensor fusion. The CareBot is a new type of Internet appliance, a personal assistant robot, that is accessible for remote video/audio monitoring and telepresence.

About the Company:

Since 1997, GeckoSystems has developed a comprehensive, coherent, and sufficient suite of hardware and software inventions to enable a new type of home appliance (a personal robot) the CareBot, to be created for the mass consumer marketplace. The suite of primary inventions includes: GeckoNav, GeckoChat and GeckoTrak.

The primary market for this product is the family for use in eldercare, care for the chronically ill, and childcare. The primary distribution channel for this new home appliance is the thousands of independent personal computer retailers in the U.S. The manufacturing infrastructure for this new product category of mobile service robots is essentially the same as the personal computer industry. Several outside contract manufacturers have been identified and qualified their ability to produce up to 1,000 CareBots per month within four to six months.

The Company is market driven. At the time of founding, nearly 12 years ago, the Company did extensive primary market research to determine the demographic profile of the early adopters of the then proposed product line. Subsequent to, and based on that original market research, they have assembled numerous focus groups to evaluate the fit of the CareBot personal robot into the participant's lives and their expected usage. The Company has also frequently employed the Delphi market research methodology by contacting senior executives, practitioners, and researchers knowledgeable in the area of elder care. Using this factual basis of internally performed primary and secondary market research, and third party research is the factual basis for the Company's sales forecasts.

"We project the minimum available market size in dollars for cost effective, utilitarian, multitasking eldercare personal robots in 2012 to be $74.0B, in 2013 to be $77B, in 2014 to be $80B, in 2015 to be $83.3B, and in 2016 to be $86.6B. With market penetrations of 0.03% in 2012, 0.06% in 2013, 0.22% in 2014, 0.53% in 2015, and 0.81% in 2016, we will anticipate CareBot sales, from this consumer markets only, of $22.0M, $44.0M, $176M, $440.2M, and $704.3M, respectively. We expect these sales despite -- and perhaps because of -- the past recession due to pent up demand for significant cost reduction in eldercare

expenses," opined Spencer.

The Company's "mobile robot solutions for safety, security and service(tm)" are appropriate not only for the consumer, but also professional healthcare, commercial security and defense markets. Professional healthcare require cost effective, timely errand running, portable telemedicine, etc. Homeland Security requires cost effective mobile robots to patrol and monitor public venues for weapons and WMD detection. Military users desire the elimination of the "man in the loop" to enable unmanned ground and air vehicles to not require constant human control and/or intervention.

The Company's business model is very much like that of an automobile manufacturer. Due to the final assembly, test, and shipping being done based on geographic and logistic realities; strategic business-to-business relationships can range from private labeling to joint manufacturing and distribution to licensing only.

Several dozen patent opportunities exist for the Company due to the many innovative and cost effective breakthroughs embodied not only in GeckoNav, GeckoChat, and GeckoTrak, but also in additional, secondary systems that include: GeckoOrient™, GeckoMotorController™, the GeckoTactileShroud™, the CompoundedSensorArray™, and the GeckoSPIO™.

The present senior management at GeckoSystems has over thirty-five years experience in consumer electronics sales and marketing and product development. Senior managers have been identified for the areas of manufacturing, marketing, sales, and finance.

By the end of this year, the Company plans to complete productization of its CareBot offering with the introduction of its fourth generation personal robot, the CareBot 4.0 MSR.

What Does a CareBot Do for the Care Giver?

The short answer is that it decreases the difficulty and stress for the caregiver that needs to watch over Grandma, Mom, or other family members most, if not much, of the time day in and day out due to concerns about their well being, safety, and security.

But, first let's look at some other labor saving, *automatic* home appliances most of us use routinely. For example, needing to do two or more necessary chores and/or activities at the same time, like laundering clothes and preparing supper.

The *automatic* washing machine needs no human intervention after the dirty clothes are placed in the washer, the laundry powder poured in, and the desired wash cycle set. Then, this labor saving appliance runs *automatically* until the

washed clothes are ready to be placed in another labor saving home appliance, the *automatic* clothes dryer. While the clothes are being washed and/or dried, the caregiver prepares supper using several time saving home appliances like the microwave oven, "crock" pot, blender, and conventional stove, with possible convection oven capabilities. After supper, the dirty pots, pans, and dishes are placed in the *automatic* dishwasher to be washed and dried while the family retires to the den to watch TV, and/or the kids to do homework. Later, perhaps after the kids have gone to bed, the caregiver may then have the time to fold, sort, and put up the now freshly laundered clothes.

So what does a CareBot do for the caregiver? It is a new type of labor saving, time management *automatic* home appliance.

For example, the caregiver frequently feels time stress when they need to go shopping for 2 or 3 hours, and are uncomfortable when they have to be away for more than an hour or so. Time stress is much worse for the caregiver with a frail elderly parent that must be reminded to take medications at certain times of the day. How can the caregiver be away for 3-4 hours when Grandma must take her prescribed medication every 2 or 3 hours? If the caregiver is trapped in traffic for an hour or two beyond the 2 or 3 they expected to be gone, this "time stress" can be very difficult for the caregiver to moderate.

Not infrequently, the primary caregiver has a 24 hour, 7 days a week responsibility. After weeks and weeks of this sometimes tedious, if not onerous routine, how does the caregiver get a "day off?" To bring in an outsider is expensive (easily $75-125 per day for just 8 hours) and there is the concern that medication will be missed or the care receiver have an accident requiring immediate assistance by the caregiver, or someone they must designate. And the care receiver may be very resistant to a stranger coming in to her home and "running things."

So what is it worth for a care receiver to have an *automatic* system to help take care of Grandma? Just 3 or 4 days a month "off" on a daylong shopping trip, a visit with friends, or just take in a movie would cost $225-500 per month. And that scenario assumes that Grandma is willing to be taken care of by a stranger during those needed and appropriate days off.

So perhaps an *automatic* caregiver, a CareBot, might be pretty handy and potentially very cost effective from the primary caregiver's perspective.

What Does a CareBot Do for the Care Receiver?

It's a new kind of companion that always stays close to them enabling family and friends to care for them from afar. It tells them jokes, retells family anecdotes, reminds them to take medication, reminds them that family is coming over soon

(or not at all), recites Bible verses, plays favorite songs and/or other music. It alerts them when unexpected visitors, or intruders are present. It notifies designated caregivers when a potentially harmful event has occurred, such as a fall, fire in the home, or simply been not found by the CareBot for too long. It responds to calls for help and notifies those that the caregiver determined should be immediately notified when any predetermined adverse event occurs.

The family can customize the persona of the CareBot. The voice's cadence can be fast or slow. The intonation can be breathy, or abrupt. The voice's volume can range from very loud to very soft. The response phrases from the CareBot for recognized words and phrases can be colloquial and/or unique to the family's own heritage. The personality can range from brassy to timid depending on how the caregiver, and others appropriate, chooses it to be.

Generally, the care receiver is pleased at the prospect of family being able to drop in for a "virtual visit" using the onboard webcam and video monitor for at home "video conferencing." The care receiver may feel much more needed and appreciated when their far flung family and friends can "look in" on them any where in the world where they can get broadband internet access and simply chat for a bit.

Why is Grandma really interested in a CareBot? She wants to stay in her home, or her family's home, as long as she possibly can. What's that worth? Priceless. Or, an average nursing home is $5,000 per month for an environment that is too often the beginning of a spiral downward in the care receiver's health. That's probably $2-3K more per month for them to be placed where they really don't want to be. Financial payback on a CareBot? *Less than a year*- Emotional payback for the family to have this new *automatic* care giver? *Nearly instantaneous-*

Safe Harbor:

Statements regarding financial matters in this press release other than historical facts are "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, Section 21E of the Securities Exchange Act of 1934, and as that term is defined in the Private Securities Litigation Reform Act of 1995. The Company intends that such statements about the Company's future expectations, including future revenues and earnings, technology efficacy and all other forward-looking statements be subject to the Safe Harbors created thereby. The Company is a development stage firm that continues to be dependent upon outside capital to sustain its existence. Since these statements (future operational results and sales) involve risks and uncertainties and are subject to change at any time, the Company's actual results may differ materially from expected results.

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