GeckoSystems Begins Licensing Discussions With Publicly Traded Robotics Co.

CONYERS, Ga., Feb. 8, 2010 -- GeckoSystems Intl. Corp. (Pink Sheets: GCKO | http://www.geckosystems.com/) -- announced today that they have entered into substantive technology licensing discussions with a U.S. robotics company. 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(tm)."

Martin Spencer, President/CEO of GeckoSystems stated: "As all of us here at GeckoSystems are excited about this development, due to the nature of the upcoming discussions I feel it is in the best interest of all parties involved to withhold the name of this publicly traded company at this time. The potential outcome(s) of it is something that has been in the works for several years and is now coming to what looks to be an extraordinarily profitable culmination. I believe their interest in us is due to not only our flagship product, the automatic self navigation software, GeckoNav(tm), but also the reality that we have a complete multitasking personal robot, the CareBot(tm), with verbal interaction capabilities, GeckoChat(tm), and the ability to routinely follow a designated family member with GeckoTrak(tm)."

The cost saving benefits of GeckoSystems' suite of mobile robot technologies will generate additional multiple revenue streams for GeckoSystems in the form of licensing, royalties, training, and sales of various software and/or hardware systems and/or subsystems beyond manufacturing and distribution of GeckoSystems' coming product line of mobile service robots. The CareBot(tm) is their first product, now in in home evaluation trials, to be realized from their suite of proprietary technologies.

"Hence our strongly held belief that given our extraordinarily efficient and very robust AI navigation engine, and its portability, we expect GeckoNav to also be important in other large markets such as professional healthcare, education, commercial security, public safety, agriculture, and defense. Our basebot technologies, such as GeckoNav, are not only relevant for consumer markets, but also several other business-to-business markets for improved ROI for our investors," concluded Spencer.

GeckoNav's Core Capabilities:

1. Subsumptive software architecture enabling cognizant navigation for unexpected obstacle (static or dynamic) avoidance while "on path" with the ability to resume path following.

2. Sensor fusion technology such that the GeckoNav is sensor loving. By utilizing multiple sensor systems (like a blind man listening and counting steps while using a cane, uses two senses --tactile and hearing-- to routinely navigate known, and unknown, environments) the GeckoNav's AI software architecture enables differing, high-count sensor systems synergy.

3. Short term AI memory software such that GeckoSystems' proprietary sensor fused, scanning CompoundedSensorArray may be fully utilized. Consequently, total cost for sensor systems cost is dramatically reduced.

4. Emergent behaviors expression (which are not pre-programmed) such as the left/right routine when encountering a dynamic obstacle that moves to the same side that the robot has chosen to use to avoid the now confounding obstacle. The robustness of this emergent behavior is apparent as the robot finally, after several left/right attempts, succeeds in avoiding the dynamic obstacle, and resumes path.

The resultant level of mobile autonomy can be likened to that of a "blind man with a cane in his own home" or "loose crowd capable." All GeckoNav source code is in C++ and is not hardware or OS centric.

Some Fundamental Issues of Automatic Self-navigation in Dynamic Environments

Background:
For any Mobile Service Robot (MSR) to have probable hope of utility, it must have the intrinsic and timely ability to avoid unforeseen, dynamic obstacles and still reach its desired endpoints or physical locations. Many MSR prototypes are limited by their navigation software architecture. Historically, MSR architectures have been based on either a pre-set path following technique, where the sensors are only used to detect failure of the preprogrammed path, or they have used a purely reactive technique that has no concept of the larger world that the MSR inhabits and cannot be used for useful tasks.

The path-following techniques suffer from being unable to adapt to changing conditions quickly or smoothly. The MSR basically travels blind until it is about to hit something, and once it has detected an obstacle, the resulting decisions required are very complex. As a result, the environment must be highly structured to avoid confusing the MSR so that simple decisions will suffice or a lot of computing power must be available to maintain and compute path alternatives. Requiring a highly structured environment reduces the usefulness and flexibility of such a MSR in a human environment. In addition, the need for a lot of processing power makes MSRs really expensive and their useful "on" time very short due to the power required for the “high clock” CPU or PC typically on board.

Further, the purely reactive architectures suffer from having little sense of past events, future goals, or of even where exactly the MSR is within the world. Typically such MSRs have no memory of the world that they have traveled and "live" only instant-to-instant. They may reach a particular destination, but it is by pure chance and the MSR will not be able to recognize that it has reached the desired destination without providing a modified environment (e.g. beacon techniques such as the legendary Arctec Systems’ "Gemini," Evolution Robotics *ER-1* and others). In its pure form, something seen in many toy robots, this technique is almost useless for true automatic self-navigation or tasks in a dynamic human environment. This kind of MSR is typically characterized by its use of binary IF-THEN rules like "If bumped left then turn right." Such an architecture does not scale for the multiple sensors required for Cognizant Navigation. Cognizant Navigation is the ability to find locations repeatedly upon request without hitting unexpected obstacles.

Cognizant Navigation is a non-trivial problem that has a number of facets. There must be enough sensor information of the right kind to not hit large obstacles such as walls, furniture, and people. There must also be enough sensor information to avoid smaller obstacles such as toys. Furthermore, the navigation engine must be able to react to quick local changes without losing track of its task. The MSR must also have a memory of where it is within the world and be able to repeatedly find locations within that world even if there are unexpected obstacles. This means that there must be enough processing power and RAM to accomplish this while still having enough battery life to stay active for many hours while performing useful tasks like vacuuming or carrying more than a trivial sized load. These important capabilities are the basic, required foundation for useful MSRs in a human environment. Until the CareBot, almost all consumer MSRs have fallen short in one or more of these areas.

Cognizant Navigation is much more than the simple reactive, bump-turn mobile robot behaviors seen in most traditional, or legacy mobile robots. Such a robot may reach the goal, but isn't "aware" that it is attempting to reach that goal and can't recognize it when located. Other legacy mobile robots blindly follow line segment paths like virtual train tracks and may be "aware" that they are trying to reach a goal, but they have problems when reacting to new situations that require deviation from the planned route due to their limited sensors and available CPU power. Typically, these robots cannot sense obstacles until they actually run into them!

Are these MSRs cognizant? Cognizant means to be aware or have conscious knowledge. The word "aware" implies the MSR remembers where it is, where it was, where it is "supposed" to be going, as well as being aware of immediate changes in the environment that may require a response. Humanlike short term and long memory management, along with enough sensor information, is the key to resolving this problem. Your existing PC has the raw computing power, memory, and data storage needed for robust personal MSR cognizant navigation, scheduling of areas to be vacuumed, and much, much more.

GeckoSystems's GeckoNav is different. Its Biological Hierarchical Architecture provides the benefits of both control and reaction within a single framework without the disadvantages of either technique alone. As a result, it is able to respond quickly and intelligently to short-term navigation situations while still providing the ability to guide the MSR toward accomplishing useful tasks within a map of the world that the MSR maintains. It turns out that this approach is synergistic and reduces the complexity of trying to "force fit" either of the other traditional solutions to solve the whole problem.

Biological Hierarchical Architecture is a GeckoSystems' proprietary MSR navigation software scheme incorporating several advanced artificial intelligence (AI) methods such that together vote on the best solution. It should be noted that "sufficient" sensors for navigating a home environment while avoiding unexpected obstacles is a critical prerequisite.

Sensors - Why Other MSRs Bump into Walls, Chairs, Tables, etc.

Many available MSRs are limited by their sensor count, position and/or interpretation strategy. MSR sensors such as bump switches, feelers, and whiskers have the problem that they cannot sense their environment without actually colliding with the world. Fixed single sonar and infrared distance (IR) range finders are an improvement, but individually they give very little information about the surrounding world. They may help avoid running into an obstacle directly in front of the MSR in one narrow direction, but they aren't very useful in helping the MSR navigate. There are too many directions from which unseen problems can approach, and even if the obstacle is detected, it is practically impossible tell the true extent of the obstacle and what the response should be from that single data point.

Even having many different kinds of these sensors does not necessarily solve this problem. The MSR must be able to assess the current space around the MSR to enable robust navigation, and to do that the MSR must have enough information of the right kind, not just many arbitrary sensors. Expensive research MSR manufacturers understand this need, and solve this problem through a very costly array of multiple sonar and IR sensors or even more expensive machine vision systems and/or laser rangefinders interpreted by either CPU intensive computations, or by quicker neural nets that can be easily over trained and become brittle in their ability to reliably discern fixed and/or moving, unforeseen obstacles.

GeckoSystems's solution to this problem uses high-data, low cost fixed ultrasonic rangefinders (sonars) and scanning IR sensors in an array called the CompoundedSensorArray(tm). The CSA can image the surrounding space in 250-275 different directions, not just one single direction like a single fixed sensor. This is actually more advanced than most research MSRs in this respect, which in contrast can generally sense between only 7 to 16 unique obstacle positions on the forward half of the MSR. This is an increase in resolution of 15 to 40 times over such MSRs! The reason for this is that such MSRs tend to assume and operate in fairly structured environments, like offices, empty campus hallways and contest mazes and as a result encounter fewer challenges in their environments. In contrast, GeckoSystems' basebot technologies have been designed and tested for typical home environments, which many consider to be the most challenging of all, from the beginning.

About GeckoSystems International Corporation:

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 companion robot) the CareBot(tm), to be created for the mass consumer marketplace. The suite of primary inventions includes: GeckoNav(tm), GeckoChat(tm) and GeckoTrak(tm).

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 and interviewing 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 statistical substance for the Company's sales forecasts.

Not surprisingly the scientific statistical analyses applied revealed that elderly over sixty-five living alone in metropolitan areas with broadband Internet available and sufficient household incomes to support the increased costs were identified as those most likely to adopt initially. Due to the high cost of assisted living, nursing homes, etc. the payback for a CareBot(tm) is expected to be only six to eight months while keeping elderly care receivers independent, in their own long time homes, and living longer due to the comfort and safety of more frequent attention from their loved ones.

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(tm), GeckoMotorController(tm), the GeckoTactileShroud(tm), the CompoundedSensorArray(tm), and the GeckoSPIO(tm).

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.

While GeckoSystems has been in the Development Stage, the Company has accumulated losses to date in excess of six million dollars. In contrast, the Japanese government has spent one hundred million dollars in grants (to Sanyo, Toshiba, Hitachi, Fujitsu, NEC, etc.) over the same time period to develop personal robots for their eldercare crisis, yet no viable solutions have been developed.

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. The Company is the first personal robot developer and manufacturer in the world to begin in-home eldercare evaluation trials.

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 care giver 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 personality 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 care giver, 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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