Movers and Shakers Interview

David H. Horne, Jr. (President and Chief Executive)

David Horne's friends and associates thought he had spent too much time in the hot Florida sun when he announced he was leaving a position with one of Florida's most powerful and prestigious legislative lobbying firms, and a highly lucrative career, to take the helm of a start-up company with some "radical new technology". But Horne felt otherwise and accepted the job as President and CEO of Gaiacomm International Corporation because he recognized: 1) the validity of the technical claims GIC was making and 2) the infinite possibilities for the technology's future. While serving as a navigator/bombardier for the USAF Tactical Air Command during the Viet Nam War era, he dealt daily with LORAN, a technology fundamentally similar in many respects to Gaiacomm's 4th Generation Global Wireless Communications (GWC4) technology. He decided the risk was worth "*the chance of a lifetime*".

Horne brings three decades of top-level business management and legislative consulting experience to the executive team. As a highly successful political campaign manager, Horne directed numerous 'dark horse' candidates to astonishing victories, including State Senators, members of the House of Representatives and the Commissioner of Education for the state of Florida. Naturally, he maintains a close relationship with many highly placed elected government officials who still seek his counsel and sound business acumen. Over 30 years of executive-level experience in Banking, Finance, Investments, Lobbying and Information Technology helped him construct the blueprint for the corporation's business plans and steer its direction and growth.

1. Gaiacomm International Corporation is one of the high profile companies developing an innovative technology in the wireless communications sector. From the vantage this provides, what do you see as the hottest growth markets and technologies for this sector?

How long is this article going to be? Okay, here goes --- the future according to Gaiacomm. Numerous business markets, both vertical and peripheral, will flourish because Gaiacomm exists. Which is to say, that because of the power that Gaiacomm's terahertz technology will provide, and the inadequacy of 3rd Generation wireless technology to meet the needs of the marketplace, a move from 3G development to 4G will occur rapidly once the opportunities for new applications, and new features for old applications, becomes evident. Now there has been heavy investment in 3G, and many will resist at first, but soon even the most obstinate of these businesses will come to accept that trying to build on the backbone of 3G wireless symbolizes a pointless tussle with the obsolete. The hottest growth markets and technologies:

- **CELL PHONES.** I think it's fitting to begin here, inasmuch as 4th Generation Global Wireless Communications is Gaiacomm's first line of business and our major foray into the wireless arena, and naturally, cell phones are an integral part of that business. Cell phone manufacturers and manufacturers of peripheral equipment recognize that achievements in cell phone technology are held back only because of the limited speed and imperfect

range of coverage of existing available wireless technology. Terahertz wireless will enable a wave of new advancements that currently exist only on the drawing boards of the major cell phone manufacturers.

- **CAMERA PHONES.** To this point, camera phones have been little more than a novelty. But that's about to change as manufacturers of cell phones partner with manufacturers of cameras to blur the lines between these devices. With a terahertz-modem equipped phone, the sophistication, speed and storage will allow wireless customers to photograph subjects in much greater digital detail, zoom in and out with exceptional focus and clarity, and store hundreds of terabits of graphic data in their handsets for later development. A cottage industry may spring up collaterally in selling pictures taken of newsworthy happenings. How many times have you wished you had a camera with you when something spectacular happened unexpectedly? We normally don't carry our cameras around with us wherever we go, but we do carry our cell phones. Snap a picture of an accident or unscheduled event and you might be able to sell it to your local news outlet or even one of the major news networks.
- **AIRPORT/SEAPORT CARGO INSPECTIONS.** Terahertz-aided imaging becomes an integral partner in addressing security and safety problems posed by terrorism. Speedy security checks and timely validation of the contents of shipments, packages and containers will be a huge market due to this technological innovation.
- **SUBMARINE COMMUNICATIONS.** Today, submarines must approach the surface for communications with ships, aircraft, and land-based facilities. Rapid bulk data exchange is not possible as the vessel submerges to avoid detection. Maintaining stealth is not possible as the vessel is close to the surface and engaged in communication transfers. Salt water, due to its ionic bonding strengths, causes attenuation of signal and blocks 2-way communications. It functions as a giant cloaking device for signals within existing bands and frequencies. Terahertz-based technology can enable a submarine to remain submerged at great depths, fully able to engage in encrypted communications with ships, aircraft, and land facilities. Salt-water attenuation ("cloaking") will no longer be a problem. Look for large naval contracts to bring a new generation of businesses to bid on government RFPs for wireless services.
- **DEEP SEA EXPLORATION.** Again, terahertz-aided imaging takes the forefront of this frontier. With our technology capable of overcoming the "salinity cloaking factor" of the world's oceans, unparalleled imaging of the ocean floor and its contents will soon drive a host of new players into this market. Whether it's sunken ships, lost cargo recovery, mineral harvesting or the underwater mining of precious metals, the lucrative potential for surveying the earth's last frontier from the surface will be a temptation too great to resist. Geological discovery of oil, coal, natural gas and minerals in the seabeds, all can be detected by their distinct terahertz signatures.
- **LAW ENFORCEMENT TECHNOLOGIES.** GIC proposes its technology for use not only in ultra-fine resolution, but also in the rapid detection of wanted persons based upon camera-scans of large crowds. Each person's image is relayed to law-enforcement data centers, and if identified as "wanted", the person's location is quickly reported to local enforcement personnel. Terahertz processes identify a person in similar fashion to a "finger print", and with equal reliability. Again, a huge advancement for law enforcement related applications.
- **METEOROLOGY.** Weather patterns emit strong energy transmissions indicating force and direction. Tornadoes and wind-sheer can be studied in-depth, and clear resolution of energy development patterns would facilitate wind-sheer detection around airports for airline safety by re-direction of approaching aircraft and warnings to those already in a landing pattern. Terahertz technology excels at this type of detection.
- **NEURAL PROSTHESES.** Neural prosthetics communications fast enough to keep up with nerve impulse and brain-to-limb autonomic signaling without the threat or fear of unwelcome electronic interference or jamming will be accomplished with terahertz

communications and herald a new era in creating artificial limbs, and new hope for the handicapped.

- **MEDICAL AND DENTAL IMAGING.** Dental examinations depend heavily upon X-rays for detection of decay in teeth and bone decomposition. Treatments are predicated upon the images received. Current technology not only fails to detect decay, but also exposes the patient, and sometimes, the specialist to harmful radiation. Mammograms are another critical detection tool for breast cancer in females, yet current technology cannot detect some cancers presence, especially in women having implants or who are significantly overweight. Misdiagnosis can provide enough time for cancer to spread into lymph nodes and surrounding tissue such that it transforms into a terminal cancer from one that could have been eliminated via surgery if detected accurately. Terahertz imaging of soft tissue surrounding dense material is highly accurate and poses no threat to patient or practitioner.

- **MOVIES, HIGH-SPEED DATA TRANSFER.** We have already been approached by the representatives of a producer of major motion pictures, who is concerned with lost revenue from having his movies "pirated", copied and sold on the black market. He wants to be able to do two things: 1) transmit his feature-length movies in real-time to theatres across America for showing, eliminating the actual distribution of the film and thereby eliminating the opportunity for theft and duplication and 2) doing likewise, direct to the consumer, for viewing on their televisions and home-theatre systems on a pay-per-view basis. Encrypted, these transmissions would not be intercepted by unauthorized users and provide an additional revenue stream for his studio.

  Currently in the world of high-speed data transfer, you must have either a T-1 or T-3 trunk line installed to send and receive large amounts of bulk data within any useful timeframe. With our terahertz transmission, the need for this apparatus is eliminated, the speed and reliability is significantly increased and the time of transmission reduced, which allows you to start using the data more quickly, which is desirable for companies or users where time is an important factor in the processing of that data. Downloads from the internet, for example, can be time-consuming and quite annoying. We've all clicked on the download button, only to see a pop-up window informing us of time remaining to complete the download. If it's 1-5 minutes, we don't mind, but when it reads 30 minutes or longer, let's say, we become frustrated and may even cancel the process. Then there's the prospect of a parity error or another disruption in the process along the way and the integrity of the download is invalidated and your time wasted. Imagine, if you will, that same transmission lasting 3 seconds. Even if an error occurred, re-downloading would be a minor inconvenience.

- **REAL ESTATE & PROPERTIES VIEWING.** Real-time viewing of real estate and other properties will be viewed in panoramic detail from around the world. Two-dimensional still photographs can be misleading, on-site viewing too time-consuming. Take a tour and examine everything in explicit detail. See what you want to see. Revisit as often as you like. A California company, PropertyKey.com, has discussed that possibility with us and we are excited about that potential business.

- **VIRTUAL EDUCATION CLASSES.** Real-time viewing of college classes will be viewed in panoramic detail from anywhere in the world. Are you worried because you missed last week's class or crucial lecture? No problem. Call it up from the archives and see it new or repeatedly until the concept is clear or you learn the material by rote. You set your own class schedule. Ideal for those that must work while going to school.

- **COMMUNICATIONS/FIBRE OPTIC RINGS/ACCESS POINTS.** Across America, there are currently many "fiber rings" that are "dark" or without activity due to the inability to cost-effectively connect them with businesses occupying complexes miles away. Two ways exist to connect to these metropolitan rings: local telephone company connectivity via dedicated lines, a very expensive and usually cost-prohibitive proposition and obtaining "right of way" to lay fiber optic cable or an alternate high-speed medium to connect

directly with the ring, usually even more cost-prohibitive. Gaiacomm's terahertz-based technology can enable communications between the ring data exit-point and the business complexes already wired for wireless reception and exchange of high-speed data. The terahertz technology can enable exchange rates in excess of 100 frames per second, far faster than current DSL and broadband cable. This overcomes the cost-prohibitive aspects of a business's capability to utilize the Access Points and it revitalizes the "dark" rings to become functional, creating a revenue stream for municipalities and/or private interest groups that have investment in such infrastructure.

- **ENCRYPTION TECHNOLOGY.** Numerous security protocols based on various encryption algorithms are currently under development by various sectors -- the government, universities, private companies, the commercial market, etc. -- to replace the Data Encryption Standard, a 56-bit key used extensively throughout the world, and subject to attack by hackers trying to breach security for any number of purposes -- mischief, mayhem, espionage, sabotage or perhaps, just curiosity. However, the push, the sense of urgency has not been there, but with the introduction of the Intel terahertz microchip processor and Gaiacomm's new technology, speed will dictate that the development and complexity of these protocols keep pace to avoid serious threat to secured communications. The new 128-bit Advanced Encryption Standard will be woefully inadequate as a defense, and new standards, perhaps 512-bit or 1024-bit algorithms will follow. At one trillion cycles/second, the speed terahertz presents will allow hackers to run an endless stream of combinations to gain access and will send many mathematicians and cryptographers back to the drawing board.

- **RFID (Radio Frequency Identification).** An RFID microchip is a small piece of silicon, half the size of a grain of rice that carries specific information — anything from commodity prices, to electronic instructions, to your complete medical records, etc. Equipment called an RFID "reader" can wirelessly pull that information off the chip and in turn deliver it to any electronic device — a cash register, an inventory screen, a home appliance, even directly onto the Internet. RFID is the technology used now to automate tolls at bridges; drivers are given a device with an RFID chip inside, allowing them to drive through the tollgates without stopping. An RFID reader in the tollbooth senses the information on the chip and the toll is automatically deducted from the driver's account.

  The first large-scale application of RFID will be in retail. Wal-Mart, who popularized the use of bar codes some twenty years ago, is expected to push its suppliers to adopt RFID in packaging their products. And some manufacturers are already doing it. Ultimately, a reader on every retail shelf will be able to automatically sense when the store is low on inventory and place an order to restock. RFID will facilitate more accurate tracking of merchandise in the store, significantly reducing theft and other losses. Use of advanced RFID technology means the risk of theft, loss, duplication or counterfeiting of data will be substantially reduced or wholly eliminated.

  In Japan, one large bookstore chain plans to use RFID to study the habits of customers who buy books in their stores, tracking the number of times and for how long each book is taken off the shelf and examined before someone actually purchases it? The European Union is studying the idea of integrating a tiny RFID chip in every paper Euro dollar, thus adding another means of counterfeit protection. An American company, Verichip, is developing an RFID chip implant that will permanently store your medical records under your skin, so any hospital ER equipped to do so can access your health information even if you are unconscious.

  When combined with advances in wireless technology, more applications surface, one in particular, personal identity tracking, jumps to mind. The threat of child abduction is a common nightmare of all parents these days. Indeed, no greater nightmare, real or imagined, surpasses that of having your child abducted by a stranger. Law enforcement says that the odds of recovering an abducted child unharmed decrease geometrically with each passing day. If a child was inoculated with a subcutaneous RFID chip that could be scanned by a terahertz radio frequency equipped scanner, the child could be located

within minutes of the start of the scan. Prisoners furloughed from prison for work details or on home detention, currently fitted with ankle monitors, could be injected with an RFID chip that could be monitored more easily and at much lower cost.

RFID microchip products are being actively developed for a variety of personal and commercial security, as well as homeland security, defense and other secure-access applications, such as authorized access control to top-secret government and private sector facilities, research laboratories, and sensitive transportation resources, including the area of airport and harbor security.

I could go on listing more, but I think that should give your readers more than enough to chew on. We are on the threshold of a brave, new world of communication with many intriguing applications, some thrilling and some even horrifying, and all of them impacting our lives in ways we never contemplated.

2. How does Gaiacomm approach product development? Is there a set philosophy as to which product areas will be focused upon, or in how product areas will be chosen?

The product areas we will focus on, quite simply and frankly, will center on profitability first. Those that are likely to produce the largest return on investment will get priority treatment. As the company becomes more established, more financially sound, we will branch into areas that we feel are needed and worthy of our efforts --- provided our B2B partners are not already operating there successfully and competitively. That is not to imply that we would be afraid of existing market competition. Rather, we believe we will be most successful by establishing business partnerships with other companies -- large and small -- and helping them prosper through our association and utilization of our base technology.

3. What is unique about Gaiacomm's value proposition for the wireless communication sector?

Our Antennae/Amplifiers cover a broadcast range of five million square surface miles, using the magnetic fields of the earth. Our name, in fact, Gaiacomm, is the combination of telescoping two words --- "Gaia", the Greek word for earth or earth-friendly, and "comm", short for communications --- to derive its message of using the natural properties of the planet to enable telecommunications. With nine of these Antenna/Amplifier towers and 27 attendant CRITERIA towers (3 per A/A tower) to handle billions of calls and data transmissions, there will not be a place on the earth, or below it, that cannot be served. And due to the strength of its near infrared spectrum wavelength, no natural impediments or physical barriers will disrupt the signal in any measurable form. Some day in the not-too-distant future, those born today will view old Verizon commercials --- the ones with the catchphrase, "Can you hear me now?" --- and they will ask incredulously, "What was that all about?"

4. What is your competitive landscape at this stage? How do you feel, your products would fair in the market - in terms of USP (unique selling point) and customer satisfaction?

We have no known direct competition at this stage of our development, because no one is developing a terahertz platform, and as such, our only opposition, if you will, would be marketplace acceptance. We possess a unique technology that has unmatched advantages to any currently existing because of its great power and versatility. It is protected by Trade Secret. Dr. Judah Ben-Hur, our Chairman and founder, spent 18 years perfecting it, so it unlikely that any who follow us will be able reach the market in time to prevent us from saturating the market as the sole provider of global wireless telecommunications support and other applications based on or dependent upon that technology. Unique selling point? Greater speed and reliability and versatility. Uninterrupted service. Unequaled range of coverage. No known blocking or cloaking factor that can disrupt the signal. Large amounts of bulk data transmitted instantly through an ultra-wide "pipe".

5. How would you describe your competitive strategy?

I've always liked the approach espoused by Civil War General Nathan Bedford Forrest, who said "In order to ensure success, you must get there the first-est with the most-est." Gaiacomm International plans to reach the market with the latest, greatest and straightest technological innovations, and be first in line to offer something everyone's going to want and need.

6. What does Gaiacomm want to accomplish in the next 5 years?

We want to do everything. World's leading provider of wireless communications … Innovator and pioneer in medical research through soft tissue imaging … Neural prosthetics communications … Geological and oceanographic exploration … Discovery of vast new deposits of fossil fuels, natural gas, precious metals and minerals, and hundreds of other ad hoc applications we haven't even thought of yet. And on and on, as big as we can dream, because we know we have the vehicle to carry us there and beyond. I just realized I sound like a promo for the Sci-Fi channel, but it's true; it's not hype; it's not a hustle; it's not illusion; it's not the stuff of daydreams run amuck. We're going to be busting paradigms in practically every industry, and the geophysical sciences, too.

I know that all such far-out claims will be met with great cynicism and bias, pointing out the risks and variables fundamental to such an enterprise. Indeed, they are subject to uncertainties that could cause actual results to differ materially from the expectations I've depicted here. These uncertainties include, among other things, unpredictable fluctuations in the global economy, product price volatility, product demand, better-financed market competition and the general risks inherent in the operations of any company, but I also know that we will be vigilant in monitoring all the aspects of the market that could jeopardize our chances for success and expose us to economic failure, and we will have remedies at the ready to counteract them should that happen.

We do have a clear vision of where our journey will take us and what we can accomplish. I've been accused of being flushed with too eager anticipation, and I know that's true, but I can't help marveling at this discovery of ours, as I would imagine Thomas Edison did when he realized what great frontiers lay ahead for his light bulb and the illumination needs it would serve. Needless to say, I'm not Edison, but you could say I work for Edison in the person of Dr. Judah Ben-Hur and it fills me with wonder and child-like enthusiasm at what lies ahead.

7. What do you envision for the future of the wireless communications industry? What role should we expect Gaiacomm to play in shaping the future of this market?

The greatest dilemma I face as President is resisting the temptation to open up too many lines of business at once. Apart from providing wireless telecommunications service, I could launch nine distinctively separate applications tomorrow if I had the resources and the experienced manpower to fund and staff them.

I can think of three examples in the field of imaging alone, just off the top of my head. I would say that we could provide consulting services for subsurface exploration of oil, precious metals and minerals, both on land and at sea, using the unmatched imaging capabilities that our new technology gives us. Why use calculated risk scenarios to determine where you drill? Scientific? Yes. Infallible? No. Costly? You betcha! We'll tell you exactly where it is, how far down it is and what you'll likely encounter on the way down. Sunken ships, same thing. You want to dive on old shipwrecks looking for treasure; determine if your cargo vessel went down where you suspect and whether the cargo is salvageable. We'll tell you where to find the ship and what's on board without even getting our feet wet. All you would have to provide is the general location you wanted searched … and a modest fee for our services, of course.

And speaking of cargo, security checks have become the major concern for airports and seaports today. The extraordinary problem they face is how to validate the contents of a

shipment that passes through their authority without opening each package or container; and doing it expeditiously when there are thousands of parcels to inspect and certify for the public's safety. We could install our imaging technology at any port where cargo shipments from terrorists could be a problem, combine it with fail-safe detection software and within 90 seconds, scan over ten thousand parcels in an area the size of a football field and identify every weapon of mass destruction, terrorist device and pathogen known to the software.

Our company's arrival on the business scene seems to me to be one born of kismet because there are suddenly a lot more of these "extraordinary" problems facing the world today that didn't exist a decade ago; and not to put too fine a point on it, we have a technological answer for the majority of them. This is an exciting time for all of us, and a bit scary, and I consider myself privileged to be helping Dr. Ben-Hur introduce this emergent technology of his with all of its magnificent benefits.

8. What would you like for your investors and partners to know about Gaiacomm International?

Beyond our goal of making our mark in the business world as a yardstick by which all others that follow will be measured, and apart from the money that will naturally accrue from such success for our shareholders, we want to be a example of what humanity can achieve in the global community through the medium of communication. The three founders -- Dr. Ben-Hur, Dan Thomas and Rob Cotton -- and I pledged from day one that in addition to good businessmen we would be good citizens of the world and to do so we would be four things, if nothing else.

1. **Good Neighbors,**
2. **Good Samaritans,**
3. **Good Stewards of the Earth, and**
4. **Good Will Ambassadors to all nations and all cultures.**

Our values embody a disposition to preserve what is precious to us all, to protect what is fragile and irreplaceable, and to instill an aptitude for constant improvement and a sense of urgency in our workforce, so that we can produce a vital product of the best, affordable quality in a timely manner that we can always point to with pride. This taken together and applied sensibly with established business practices and strict GAP adherence would be our gauge of whether Gaiacomm International is an unqualified success. We believe that our sui generis technology combined with the high ideals incumbent to all things of great stature is a powerful formula for progress. Attentiveness to past mistakes, present opportunities and future trends and events is also part of that equation. We want to leave the world a bit better than we found it.

9. Finally, any thoughts on Gaiacomm International Corporation receiving Frost & Sullivan's 2004 award for excellence in technology of the year in the field of Wireless Communications?

I would like to express, on behalf of all us at GIC, our gratitude and appreciation by saying, Thanks so much. You have changed our lives forever and given us the credibility we have been seeking and altered our future in a way that simply could not be purchased or achieved otherwise in the same timeframe. We still can't believe that it has happened; that we've been so fortunate. To win the Frost & Sullivan award for excellence in technology should be the highlight for any company's year and it is certainly so with us. This is a high we never want to come down from. And we will never forget what you have done for us. And thanks for this interview; it was great talking with you.