“Useful Technology” is the Foundation of Success

By Susan Carr-Hudgins

(An economic development article published in the July 2002 edition of the Business Monthly. (www.bizmonthly.com)

2000 was the "Year of Fiber Optics" in Howard County. However, a group of Howard County companies have been toiling away at other advanced technologies and products designed to improve and speed communications for business and personal use. And they have been having great success, even in this trying year.

Communications touch virtually every part of our lives. We communicate using cell phones, the Internet, radio and television, but we also use these vehicles for applications such as entertainment (games), data gathering and product purchases. There are many opportunities for companies to "find a need and fill it."

Just as diversity has always been a key component of Howard County's business base, companies here have found diverse, exploitable niches within the umbrella term of "communications." This broad category now includes remote access, radio frequency, microwave and satellite technology, as well as tracking systems and broadband innovations such as video compression.

Howard County's proximity to federal resources has made it attractive to the defense industry, and several companies, such as TRW, Inc. and Honeywell Technology Solutions, Inc., have been working in satellite communications for a while. At last count, in Howard County, over 20 firms employing over 1,700 people could be categorized as developing technology or products for high tech communications. Johns Hopkins University Applied Physics Laboratory is also heavily involved in high tech communications and employs an additional 3,300 people here.

The high tech communications industry has been the subject of much scrutiny by numerous analysts, and the general outlook is positive. According to PricewaterhouseCoopers, global spending on media and entertainment products alone is expected to reach $1.4 trillion annually by 2006. Analysts there have reported that digital distribution of content aided by rising broadband penetration is expected to fuel that growth. InStat/MDR, a high tech market research firm, reported that in 2001, approximately 23% of workers in medium and large businesses were considered mobile, spending 20% or more of their time away from the office. InStat/MDR expects the number of wireless data users to reach more than 39 million in 2006. In the consumer marketplace, more than 21 million Americans will be using public wireless local area networks by 2007, such as remote Internet access provided in airports, shopping malls and cafes, according to Analysys, a market adviser firm based in the U.K.

Analysts' predictions are providing rationale for funding ventures. The venture capital community, a barometer of market feasibility, appears to have embraced wireless communications as an important entity for both consumer and business markets. Paratek

Microwave, a Columbia-based company that manufactures radio frequency components and wireless handset products, has received a total of $53 million in venture capital this year. Paratek employs over 100 people in the county. Also receiving funding in the past year is iBiquity Digital, makers of digital radio technology that employs 40 people in Columbia. iBiquity raised $45 million in its third round of financing this past April, and has inked agreements with Clarion, Alpine and Ford to research and integrate iBiquity's technology into their products.

Exploring ways in which advanced communications can improve productivity, Unwired Express, a Columbia company, has developed "Sales Force Effectiveness," a software application that allows a mobile sales force to effectively interact with its company's back office systems via a wireless handheld device. Unwired Express's product eliminates the need to search for a dial-up connection. Salespeople can check up on a customer record or record a critical interaction right in the field. The Sales Force Effectiveness software does not require any special hardware and can be used on virtually any handheld wireless device (including existing cell phones) and presents data specially formatted for small screens, including inventory or pricing information.

High tech communications companies are not only helping people communicate but are enabling inanimate objects to "communicate" as well. Matrics, also based in Columbia, makes a radio frequency identification chip, labeled "RFID." Marketed as a supply chain and retail management tool, when attached to a package or product, a RFID can transmit data back to a scanner located as far as 15 feet away. The product has reached new levels in RF productivity and efficiency, because it can be made for as little as 30 cents apiece, and the Matrics scanner can simultaneously read thousands of RFIDs. Conceivably, a store manager can obtain inventory data in seconds by scanning a roomful of RFID-tagged products. The company has also been recently backed by $14 million in venture capital funding.

Howard County Economic Development Authority's NeoTech Incubator harbors several companies working in high tech communications as well. Difference Engines is developing Internet file compression and decompression technology, while Business Devices' products enable mobile and enterprise devices to collaborate via the Internet. Software designed by a2z, Inc. streamlines administrative processes and automates tasks via the web and helps associations and other organizations better manage trade shows, conference and seminars. Plethora Technology, the most recent addition to the incubator, offers a commercial software product for remote Internet access for businesses and interaction among employees using text conferencing, voice conferencing and other forms of collaboration. "We have developed a product well-suited to the times because we protect business information on the Internet, enable telework and telecommuting, and improve business productivity," said Ben Martindale, CEO of Plethora.

The current demand for high tech communications products is just the tip of the iceberg. It is anticipated that use of wireless and radio frequency devices will become commonplace not only in business but in the home as well. GPS equipment in automobiles is not uncommon. It's conceivable that a chip embedded in food packaging

will transmit the necessary cooking temperature and duration right to your microwave. The endless possibilities, combined with increased compatibility of components and price decreases of necessary equipment (such as routers) and airtime, will ensure a steady development stream of new products and services. Howard County companies have had a head start in this industry - a bright future is already in the works.