early diagnosis, treatment, and care. Several university partners have expressed their deep interest in partnering with us on the research and development issues of such a project. We feel that the same technologies will also be relevant to research in broader populations, including attention deficit disorder, language disorders, Alzheimer’s treatment and research, and many more areas.

S.S. Demir: Lots of the readers will be interested in hearing about related career and/or investment opportunities. Would you please summarize the career and/or job opportunities?

R. Oberleitner: We are a small business, currently being modestly funded by multiple sources. We have submitted proposals for a number of external grants from both the federal and private sectors; they are currently being reviewed. As our growth continues, we anticipate creation of a wide range of multidisciplinary opportunities. The job openings will include biomedical engineers, computer scientists, and information technologists. We believe that there will be many challenging and financially and emotionally rewarding career paths carved out for the professional staff tackling special-needs disabilities.

We invite socially minded investors and large company collaborators who see this as an opportunity to help leverage their resources to provide these bioengineering services quickly and dramatically. We’ve intentionally kept the TalkAutism services as a branded entity with potential intellectual property opportunities. Philosophically, we believe in industry’s role to accelerate the availability of these bioengineering services to support families, universities, and governments.

R. Oberleitner: Our current communication services can be viewed by going to www.talkautism.org, where nearly 1,000 families and professionals use Talk Autism each day. Bioengineers and companies interested in sponsoring collaborative research activities, or wanting to be apprised of the progress of bioengineering principles applied to autism, may also want to go to www.autismtechnology.org. Readers should feel free to contact me directly at admin@talkautism.org.

For more information about TalkAutism™ services:
Please visit www.talkautism.org
Email: admin@talkautism.org
Phone 888-355-7161

Technology to Improve Autism
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BSM Company Profiles

BME Company Profiles

I n this column I am featuring e-Merge Medical Technologies and specifically its TalkAutism service by presenting an electronic interview I recently had with Ron Oberleitner, e-Merge’s president.

S.S. Demir: We were honestly surprised to see TalkAutism exhibited at our recent annual meeting. Would you please introduce TalkAutism to us and let us know the connection to bioengineering?

R. Oberleitner: Historically, e-Merge has been successful in introducing emerging technologies to the medical marketplace in fields of telemedicine, advanced diagnostics, and Internet services. In 2001, due to my own personal involvement with autism and knowing the unfortunate rise in new diagnosed cases, we redirected much of e-Merge’s resources to introduce and manage a technology-based service called TalkAutism, a branded communication service for this rapidly growing special-needs population. People with autism have a broad spectrum of deficits in communication and social skills and abilities, and yet they respond well to intervention if diagnosed and worked with at an early age. TalkAutism has rapidly become a national “watering hole” for the autism community by providing health and educational data to accelerate research. Upon interactions with biomedical engineering world leaders like Prof. Swamy Laxminarayanan, we attended the recent Engineering in Medicine and Biology Society (EMBS) Conference in San Francisco and then founded and now support a nonprofit organization, Princeton Autism Union countries. My wife and I also participated in the EMBS brainstorming sessions throughout the United States. The United States has already pays an estimated US$90 billion a year for services and treatment for up to 1.5 million people diagnosed with autism in this country alone—most under the age of 13. Other countries are facing similar incidences. In less than ten years, the societal costs are expected to rise to US$200–400 billion per year. As an example, 15,000 public school districts currently pay up to US$60,000 per child to bus children to out-of-district special-education schools. The improved cooperation of students and teachers in medical and behavioral observations to remote experts could meaningfully reduce the need to do this. Families could also better communicate with their health care professionals. Thus, our services should keep more students in local educational settings and help families deal with a greater range of difficult behavioral and medical events in the home. Importantly, researchers would be able to obtain far better data on this disability and have access to a greater study population; stressed families and remote medical facilities are more likely to participate in behavioral studies through telemedicine, reducing-stressful travel. A huge market exists for using biomedical technologies like telehealth and information technology just for the current treatment and services available—and there’s an even more dramatic market and business opportunity if such data leads to more effective treatments and cures. And beyond this, a huge international market booms where there is even less access to expertise on this important disability.

S.S. Demir: Would you please comment on your company’s partnerships, collaborations and alliances?

R. Oberleitner: We’ve developed strategic alliances with universities who are interested in the TalkAutism environment as well as other telemedicine initiatives we are developing. E-Merge’s project management expertise on targeted grant programs is focused on 1) autism—a recently identified priority by NIH, 2) technology applications, and 3) rural healthcare and underserved populations. Through publications and a presence at international congresses and special topic meetings, we have attracted a great deal of interest and collaborative support from both industry and academia. Upon request from Prof. Laxminarayanan, we have interacted in the development of a proposal to globalize autism research efforts through the International Federation for Medical and Biological Engineering. We are also developing partnership initiatives with the European Union countries. My wife and I also founded and now support a nonprofit organization, Princeton Autism Technology (www.autismtechnology.org), which dedicates itself to researching and applying technology solutions to assist the autism community.

S.S. Demir: Can you give us an overview of the new areas that your company will expand into in the near future?

R. Oberleitner: Our long range goals are focused on developing center-of-excellence-quality telehealth and information services. This will facilitate a unique informatics research environment and the remote collection of a broad spectrum of pertinent data to support multiple worldwide initiatives, including NIH’s Autism Phenome Project priority. Autism research currently benefits from advances in speech processing, face processing, gaze processing, functional magnetic resonance imaging, mathematical modeling of the brain, genetic engineering, and other cognitive measures. Our services will provide both the infrastructure and the intelligent tools for data mining and interparameter correlations for effective treatments and cures.

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