01 TRANSONO NEWS

The launch of 2nd round International Co-development Project approved

TranSono succeeded in advancing to the 2nd round of the International Project for Technology Co-Development with Finland VTT supported by KIAT.

The project was a professional mobile communications technology that supports location information and risk detecting functions under extremely dangerous working conditions. TranSono devoted itself to the project’s successful development from July 1, 2011 to Jun 30, 2012. This project is about to be implemented for 3 consecutive years with a USD 260,000 investment per year (total investment USD780,000 over 3 year period) from the government.

Signed on to the Agreement for 2012 Technology Holding Company Supporting Project

The Seoul Business Agency (SBA) made an agreement with HYU Holdings for the 1st 2012 Technology Holding Company Supporting the Project. TranSono was proudly selected to sign on to this.

The goals of this project are 1) To develop ElectoVox-LTE, the integrated solution improving voice quality for VoLTE based on noise cancellation technology under a variety of noise environments 2) To retain R&D expertise resources 3) To quickly cope with the recently focused LTE mobile technologies trends and meet market needs.
**Participated in Large Small Business Fair**

TranSono participated in the ‘Large Small Business Fair’ (Technology Buying Consulting Fair) hosted by the Large & Small Business Cooperation Foundation from Sep 6 to 7 in Choongnam province in Korea.

This fair offers consulting and communication opportunities between local companies and the government, an enablement enhancement session for small companies, and a session on how to protect small companies’ technology as well as consulting services for technology purchasing.

TranSono had technology consulting meeting with KT and Dongwon Systems each. The person in charge of the new business in KT was interested in applying ElectoVox to the internal communication network. Dongwon Systems suggested TranSono to co-implement the government project which can be applied to the mobile technology devices. TranSono consulted, separately with KT and Dongwon Systems. KT was interested in applying ElectoVox to the internal communication. Whereas Dongwon Systems suggested to co-implement a government project to be applied to mobile technology devices.

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**02 Partner/Customer Spotlight**

**Meeting with Taiwanese Partners and Customers**

Dominic Lee, CEO of TranSono, visited Soltek and a mobile phone manufacturer in Taiwan. Seong-Gyun Lee, CEO of HYU Holdings joined in this meeting.

TranSono and Soltek reviewed and updated the ongoing projects issues, such as Taiwanese mobile phone manufacturer’s ASR, BT ear-set test, Sampling Rate Converter, NR in a voice call, QDSP porting for Huawei, and Test for a specific ASR engine.

TranSono and Soltek exchanged the deliverables and sales toolkit which rightly express their technology.

**Selected as Qualcomm’s ISV Partner**

TranSono was selected as one of the 10 official ISV partners of Qualcomm for its Hexagon DSP Access Program, together with Beats by Dr. Dre, BDTI, Bsquare, Nextstreaming, NXP Software, Qsound, SRS Labs, Tata, and Waves Audio. Significantly, TranSono is the first non-cellular phone manufacturer to be selected in Korea.

The Hexagon DSP Access Program provides Independent Software Vendors (ISVs) with resources that allow for the integration of an ISV’s solution to the Hexagon DSP in Snapdragon S4 processors, and it is offered for a fee.

Joining the Hexagon DSP Access Program means that TranSono will be able to shorten the time to deploy the features of ElectoVox, its own sound improvement solution, to Qualcomm S4 processors and to test for compatibility. TranSono can access Qualcomm’s source codes to take full advantage of them in its hand coding, editing, and compile tasks.

“The fact that we were selected by Qualcomm with other world-renowned ISVs is very noteworthy. I appreciate the support from Qualcomm Korea who made it possible,” said Dominic Lee, CEO of TranSono. He also expressed his expectations toward close cooperation in the future. He said joining the Hexagon DSP Access Program would allow for “optimization of its noise reduction software solution on smartphones and VoLTE even faster and lay a foundation to advance the application of technology.”
Interview with Timo from Finland VTT on working for the ProComSen Project

1. What were the main achievements of the 1st project?
   [Timo] The main achievements of the first project (project year 1) were, without a doubt, the calculation algorithms for calculating the positioning of the Terminal device (headset). This was implemented in a semi-virtual manner because of a lack of UWB prototypes, but it nevertheless demonstrated the positioning capabilities of the technology to be developed.

2. Did you have any challenges during the 1st project? If so, how did you handle and solve them?
   [Timo] The main challenge was the delay of getting actual UWB chips. We got them first in July 2012, which was far too late for the demonstration required by KIAT. The schedule was quite tight, too, but otherwise everything went relatively smoothly. We handled the lack of UWB chips by utilizing prototypes we had and implementing the demonstration in a semi-virtual manner.

3. Please briefly summarize the goal and overview of the 2nd project.
   [Timo] They are to implement a terminal device and base station using the final Sensor microcircuits and to combine TranSono’s ElectoVox software with VTT’s positioning and data transmission software.

4. What do you think is the most important factor to the second project’s success?
   [Timo] Co-operation between TranSono and VTT and, of course, all the technical work to be done by the experts in TranSono and VTT!

5. Any comments or lessons you gained while working on the 1st project?
   [Timo] Actually, I expected there would be more difficulties and misunderstandings in co-operating between the two different cultures. But the whole project has proceeded smoothly and without any big challenges. Of course, year 2 requires much more co-operation in software development, so let us see, how it unfolds.

Selected in the Global Commercialization Group Program by KIAT and UT

After successfully completing three interviews, TranSono has been selected as one of two final candidates of the GCG (Global Commercialization Group) program ran by KIAT and UT.

The program owner, Joel Momberger first came to see TranSono and then James Vance, Technical Sales visited TranSono. Tadd J. Kim, Business Development Executive of TranSono had a meeting with Stephen Finos, Sales Rep. in Daejeon.

The GCG Program was initiated and led by Moonsoo Lee, Governor of Kyunggi province. Joel Momberger, an American lawyer, who had been in the IT industry in the US, now works for the GCG R&BD Center helping venture companies with market potentials penetrate the US market by co-working with IC Square of UT (University of Texas Austin). He leverages highly experienced sales personnel and works on the marketing and sales approach.

Dr. George Kozmetky of UT pioneered the academic-industrial cooperation program. He was strongly impressed by the fact that Stanford University took a critical role in helping venture companies establish themselves in California. Texas had traditionally focused on the farming industry. Dr. Kozmetky motivated the Texas state government and academics like UT to revolutionarily introduce the IT industry to their existing industries. Due to their continuous efforts, they have obtained meaningful outputs like hosting factories of leading IT companies and research labs.

TranSono is the only company selected for the GCG Program since KIAT announced the Program. TranSono expects to expand its business to voice recognition, bluetooth, and communication related businesses in the US leveraging its US subsidiary office.
What is ASR (Automatic Speech Recognition)?

This serial feature story will be covered 3 times: 1) Industry Trend 2) Technical Review 3) Overview of TranSono ElectoVox-ASR.

The first section describes not only the industry trend but also the concept of ASR technology, why this is definitely necessary, and which benefits you can get. The second section will offer more detailed technical information and requirements for ASR. The third will show the overview and features of TranSono ElectoVox-ASR, the differentiative strengths, and outstanding performance. In case, the references of TranSono ElectoVox-ASR may be added in this serial feature story.

Automatic speech recognition (ASR) can be defined as the independent, computer-driven transcription of spoken language into readable text in real time. ASR is a technology that allows a computer to identify the words that a person speaks into a microphone or telephone and convert it to a written text.

The ultimate goal of ASR is to allow a computer to recognize in real-time, with 100% accuracy, all words that are intelligibly spoken by any person, independent of vocabulary size, noise, speaker characteristics or accent.

Commercially available ASR systems usually require only a short period of speaker training and may successfully capture continuous speech with a large vocabulary at normal pace with a very high accuracy. Most commercial companies claim that recognition software can achieve between 98% to 99% accuracy if operated under optimal conditions. ‘Optimal conditions’ usually assume that users: have speech characteristics which match the training data, can achieve proper speaker adaptation, and work in a clean noise environment (e.g. quite space).

In recent years, speech recognition technology has advanced to the point where it is used by millions of individuals to automatically create documents from dictation. Medical transcriptionists listen to dictated recordings made by physicians and other health care professionals and transcribe them into medical reports, correspondence, and other administrative materials.

ASR has three major benefits; Accessibility for the deaf and hard of hearing, Cost reduction through automation, and Searchable text capability. The outlook is optimistic that future applications of automatic speech recognition will contribute substantially to the quality of life among deaf children and adults, and others who share their lives, as well as public and private sectors of the business community who will benefit from this technology.

In the next TranSono newsletter, we will deliver you how critical ElectoVox in ASR technology and how it can enhance the ASR performance.