Nanoelectronics and Its Impact on Open Innovation in Japan
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TIA NANO: Tukuba Innovation Arena for Nanotechnology

On October 17th, Dr. Shigeo Okaya gave a talk on the impact of nanoelectronics on open innovation in Japan. TIA NANO is a joint collaboration amongst the following organizations: KEK, AIST, NIMS, University of Tsukuba and Keidaren. It was established some time in 2009 with the document from the Japanese cabinet endorsement for "New Growth Blueprints to Revitalize Japan" in 2010. TIA-NANO has an interesting business model – research-based development (due to the high-tech and high-outlay nature of the semiconductor technology) run like an incubator with representatives from different Japanese companies working together based on research grants that were given to the group.

To speak of open innovation (the topic for this quarter's seminar series), this is exactly the trend we are observing in Japan where behind-the-wall, R&D is slowly broken down into collaborative work groups bringing the best minds in the field to contribute to industry research rather than to one single company per se. However, when we dig deeper into such model of collaboration, we are also interested in looking at whether there is a way that one single company could benefit? Though there was much debate on this topic during the talk, it was only left to the company involved to work out the best solution. So might there be future collaboration between Japanese tech companies? I think there definitely will be!

I would also like to explore the opportunities between industry collaboration in other countries, and I found that such a topic has been in practice in US in the recent years but due to collaborative issues, such practices are heavily supervised to account for mutual responsibilities and benefits. One such example is the Columbia RCR Collaborative Science, who champions the cooperation with different branches of the sciences and different organizations with a list of approaches to conduct open research. As rightly pointed out, there is the increasing need for more research due to more funding sources, greater requirement of cross-discipline content and greater ease of conducting research across different locations and time zones. Again, to analyze whether such collaboration is necessary, it is always great to put in place a list of rubrics to access the cost and benefit to such research and only do it once the benefit of eliciting bright minds outside the organization surpasses the burden of separating the responsibilities and ownership claim to the research source and end result.

As we are seeing right now, more open research is happening across the world and has broken the status quo of the traditional way to conducting research within a single research center. This might generate greater liquidity to make

sure more research result could surface and with just a little bit of luck, faster go-to-market cycle in a very collaborative Japan.

[1] RCR Collaborative Science:
http://ccnmtl.columbia.edu/projects/rcr/rcr_science/foundation/index.html