

Since I was a child, I have set an ultimate goal in my life: To become a great (Computer) Engineer. A few years back, I thought to become a distinguished engineer one must be very smart and knowledgeable in his field of study. However, I found this embryonic view of an engineer was rather superficial. Looking back at my surroundings and experiences, now I would say the above mentioned skills are important, however, not sufficient. Not only do engineers have to possess a smart mind, but also they need to have a “Reconfigurable Mind”.

The term of “Reconfigurability” is pervasively used in the realm of computer architecture nowadays. Reconfigurability denotes the reconfigurable computing capability of a system, so that its behavior can be changed by reconfiguration to meet the demand of various tasks and applications. This resulted in a hybrid computer structure combining the flexibility with the speed of hardware.

A “Reconfigurable Mind” is a mindset that engineers should have. It would simply benefit engineers. Consider the communication skill that is widely pointed as the main weakness of engineers. Assessing impartially, we’ll find the main problem, in many cases, lies in the failing of engineers to reconfigure the way they communicate with different people. Engineers have a penchant to use pedantic words and terms, without carefully considering to whom they are speaking. It may be acceptable when we talk in academic conferences in our field. However, in real life, engineers face various situations where they need to explain and convince more general people, such as policy makers or investors who are not expert in a specific field. When we communicate to these less knowledgeable people, then we should articulate our words in the way that is easily understandable for those people, without having necessarily to change the essence of the message. In short, we need to have the ability of reconfiguring our mind and behavior based on what is demanded by our environment.

As for my own experience, I joined foreigner’s representative meeting for Kawasaki City when I was on my 2<sup>nd</sup> year of undergraduate. I was selected as one of twenty representatives from approximately 20000 foreign residents of Kawasaki. Our main tasks as representatives were to discuss problems faced by foreigners in Kawasaki, and propose the solutions to the major of Kawasaki city. In the meeting, we discussed many problems from multilateral point of view, because of our different background and way of thinking. This often led to heated discussions. But I found this remarkable experience really helped me to build my “Reconfigurable Mind”. It allowed me to possess the ability to view problem with eclectic perspective and also to reconfigure the way I speak, in order to convince people from the different background. It even gave me more confidence when speaking and debating at academic conferences.

Moreover, I believe this philosophy will also help engineers to cope with a number of intricate issues in new era. The chief problem of 21<sup>st</sup> century, having grown rapidly from a single-disciplinary to multi-disciplinary, reveals the necessity of reconfigurable mind. Consider the advancement in bioinformatics field. With wide views combined with broad perspectives, scientists from biology and IT fields are able to reconfigure their intelligence eclectically and multi-disciplinarily, enabling them to develop a finer and better methodology to cure cancer which employs gene sequencer to attack the cancer cell accurately without harmfully destroying the neighboring cells.

The 21<sup>st</sup> century will bring us an unprecedented experience, paralleling the increasing complexity of the challenges and issues it will produce. Viewing it in sanguine manner, it is a very exciting chance for scientists, and a “Smart and Reconfigurable Mind” will certainly fit excellently to the problem-solving method of those challenges.