Ohba Lab -WOW Alliance-

Institute of Innovative Research (IIR) Heterogeneous and Functional Integration Unit

3DI Technology, Cooling, Microfluid, Agri-Engineering

Bumpless-Build Cube (BBCube), the next generation for three-dimensional large-scale integration technology, is characterized by super parallel vertical interconnects and ultrathinning technology, and it is possible to miniaturize and thin Terabyte bandwidth systems by

co-development with thermal design. The BBCube technology is being developed by the WOW Alliance, which consists of about 40 companies, and is conducting to implement this technology in the post-scaling semiconductor market. The WOW Alliance is the only 3D development organization in Japan that uses 300mm wafers.

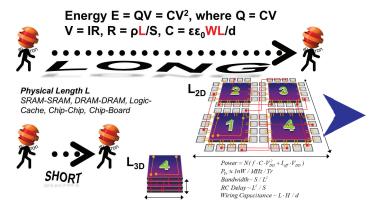
How to realize a portable Supercomputer does NOT burn your hand using 3DI technology?



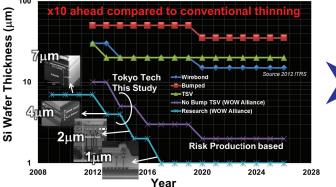
You will burn by mobile phone!





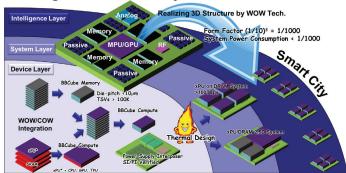


Energy of data transfer becomes small using WOW 3DI technology.

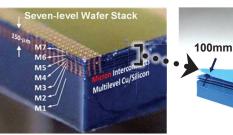


Thinning of 300 mm wafer down to one micrometer has been succeeded.

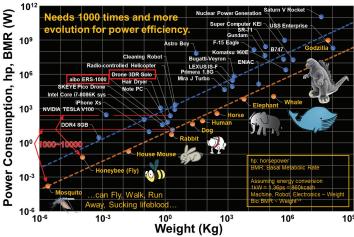
Co-Integration and Turn-Key Solution



WOW Alliance will provide every 3DI technology and its manufacturing platform.



3D Silicon Wafer 90-page Post-it Ultra-thin wafer provides small feature size.



Challenge is how to realize 1/1000 energy consumption by learning of biometabolism.