

Many office workers are suffering from health problem including stiff shoulders and backache because of stress and a long-hour work in a same posture in the office. Massage parlors, acupuncture and moxibustion clinics are popular and even some station buildings have such facilities. Acupuncture and moxibustion are one of Japanese traditional remedies for stiff shoulder and backache. With the oriental medicine, the route of energy is called “Keiraku”. When an organ is weakened or damaged, the organ’s related Keiraku shows malfunction. Most sensitive area of Keiro is Keiketsu, commonly called “tsubo” in Japanese. All ages and countries, there are various treatment methods to stimulate Tsubo and activate the flow of energy. One of the most popular methods is massage. In these days, a microcomputer-control massage chair gives a nice massage to all over the stiff body. Massage equipment is experiencing innovation year by year.

- Tsubo site

<http://www.tubonotubo.jp/search>

- Link for oriental medicine

<http://www.sinbun.co.jp/kenkou/link/link001.html>

The word, innovation, was defined by Schumpeter, an economist from Austria (Joseph Alois Schumpeter 1883-1950).

In “Theory of Economic Development” published in 1912, he has identified various activities to improve economy as “innovation.” In Japan, a white paper on economics of 1958 translated the English word, “innovation”, as “technical innovation (Gijutsukakushin)”. Since then, the word, “innovation” tends to be used only to describe technical matters only in a narrow content.

At the progress of innovation, it is said that there is something like Death Valley. Death Valley, located in the West of the United States, does not allow any creature to inhabit due to its severe climate. The “Death Valley” of innovation is the difficulty to acquire capital to commercialize new technology after the completion of basic research. Only limited number of people are interested in making a high-risk investment in the entrepreneur who has not proved his/her capability yet at the time of stepping up from the basic research to the commercialization stage. Therefore, due to the lack of capital, many entrepreneurs fail to find a way to their success. Since the success ratio to overcome the various obstacles in the Death Valley and become a winner is scarce, there are only few venture capitalists that want to invest in new technology at the very first stage of commercialization. There are many investors who show their interests when they could see

the outlook of the venture business. Incubators and Angels have a dream to raise venture business by funding, providing facilities and supporting management. Many incubators have affluent management knowledge based on their successful experience in the area of venture business and many lives around Silicon Valley.

- Schumpeter

http://homepage.mac.com/naoyuki_hashimoto/iblog/C111252006/E1850481668/

- Innovation

http://www.mext.go.jp/b_menu/houdou/14/06/2002zen/03_010101.pdf

In the middle of 1980s, Stanford University of the United States already established Management of Technology (MOT) course to educate students and engineers working in the Silicon Valley. The course has been producing a great number of entrepreneurs. In Japan, aiming to nurse many engineers with keen management sense, more and more universities with science and engineering department are setting up MOT undergraduate and graduate courses. In addition, the number of private companies and human resource training companies that offer MOT course to adults is also increasing.

- Trend of MOT education

<http://www.kantei.go.jp/jp/singi/titeki2/dai2/02siryou1.pdf>

There are two types of innovation: a successive type of innovation that modifies current type of method and a groundbreaking type of innovation that totally overturns the existing system. Examples of groundbreaking type of innovation are CD-ROM, its related products and digital camera. Currently display products are undergoing the groundbreaking innovation. CRT display is gradually giving up the prolonged market domination to LCD and plasma flat panel display. In addition, the next generation products such as FED and OLED that uses the material newly developed with nano-technology are already waiting to take over the position watching for the opportunities.

- Propriety comparison of display technology

[http://clients.weavecom.com/ifire03/images/InvestorKits/ifire_comp_\(J\)_web_Apr%2003.pdf](http://clients.weavecom.com/ifire03/images/InvestorKits/ifire_comp_(J)_web_Apr%2003.pdf)

- Articles on display

<http://www.ite.or.jp/news/keyword/display.html>

Wireless communication is also observing the arrival of new communication method including UWB and MIMO. It would not be too far that automobile safety radar system that utilizes high frequency wave including millimeter wave is going to be introduced to the market. Furthermore, terrestrial digital broadcasting had started and the shift from analog broadcasting method to digital method is progressing step

by step. The introduction of new broadcasting method, wireless communication and electric equipment will drastically change the electromagnetic environment. It is expected that EMC technology progresses synchronizing with the innovation of wireless communication and electric equipment.

- New wireless communication

<http://radio3.ee.uec.ac.jp/uwb1.pdf>

- MIMO communication method

<http://radio3.ee.uec.ac.jp/MIMO-IEICE-TB.pdf>

- Millimeter wave radar safety system

<http://www.kumikomi.net/article/report/2003/33motor/01.html>

- New and attractive terrestrial digital broadcasting by the Ministry of Public Management, Home Affairs, Posts and Telecommunications

http://www.soumu.go.jp/joho_tsusin/whatsnew/digital-broad/

- The association for promotion for digital broadcasting

<http://www.d-pa.org/main.html>



J.A. Schumpeter



Death Valley
(Ubehebe Crater)



Nobuhiko Tsunefuka

1943 Born in Tokyo

1968 Graduated from Department of Engineering Science, Osaka University

~ 1984 Worked on developing Information Technology Device at Taga Works, Hitachi, Ltd.

1991 ~ Engaged in education on EMC related matters at Hitachi Institute of Technology

1999 ~ Planning Manager