Foreword

Technology - Responding to Social Needs

Masayuki Adachi

Senior Corporate Officer
General Manager, R&D Division
HORIBA, Ltd.
(former president and CEO of HORIBA International Corporation, U.S.A.)
Doctor of Engineering

After the Lehman collapse and the economic implosion, U.S. has been implementing major remedies for recovery, such as the long-lasting ultra-low interest rate policy and the government stimulus bills. As a result, recent U.S. economy has been characterized by improved corporate performance, coupled with continuing high unemployment. During this same period, U.S. government spending increased enormously in an effort to counterbalance the downturn in consumer spending, in hopes of stimulating the U.S. economy. The spending far in excess of the levels of tax revenue consequently generated massive annual deficits, which imposes considerable cut on 2011 U.S. Federal Budget.

The budget bill was eventually passed on April 14, 2011, far later than the original deadline. The late signing and the huge cuts will impact the funding for science and technology in the U.S. when high energy and raw material costs are beginning to affect businesses.

Regardless of such delay and cuts in the U.S. budget, there are great needs for technical improvements in the energy sector, in order to conserve resources and protect environment. With advancement in technologies, the economy in Michigan is recovering, though gradually. Both General Motors and Ford are steadily rebuilding and releasing new vehicles with state-of-the-art technologies, such as hybrid, plug-in, full electric, down-sizing, and high efficiency transmission systems. The petroleum industry is also experiencing the shift to shale oil, which is reducing the import to below 50%.

In the medical sector, the health care reform in the U.S. was enacted nationally in 2010 by the passage of two bills: the Patient Protection and Affordable Care Act (PPACA), and the Health Care and Education Reconciliation Act. With these changes, the industry will face significant transformation in political, regulatory, economic, and scientific environments. No one for sure knows what will happen in detail but it is obvious that, with an increase in patient population, diagnostic testing must satisfy the pressing needs for improved automation and higher throughput of the medical instruments.

Much of the innovation in the U.S. is in information technology, biological and pharmaceutical sciences with venture capital investment at record levels in these fields. Furthermore, in IT sector, it has been announced that five new semiconductor fabs will be built in the U.S. over the next few years on the initiative of Samsung, Intel, and Global Foundries. Similar to the discussion above, there will be demands for higher automation, precision and throughput in the semiconductor manufacturing.

And finally, the overall scientific instrumentation is continuing to play an important role in security, safety, health, food and agriculture fields. In spite of the significant cuts in government budget, more accurate identification of chemical compounds is strongly required in the ultra low concentration with a minimum amount of samples.

This issue of Readout features HORIBA group technologies in the U.S., bringing you the latest discussions for all the application segments of HORIBA. Despite the challenging local, economical and political environment, science and technology in U.S. are rapidly progressing everyday. Our team in HORIBA U.S.A. pledges to provide better and practical solutions to the industry and customers to innovate on the process and accelerate the advancement by fully utilizing our expertise and intellectual assets.