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**SECONDIINTERNATIONAL FORUMON
CREATIVITYANDINVEN TION –AB ETTERFUTUREFOR
HUMANITYINTHE21STCENTURY**

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WEALTHCREATION THROUGHINVENTION,INNOVATIONANDCREATIVITY
(PHILOSOPHICAL,HUMANITARIAN,EMPLOYMENTAND
DEVELOPMENT-RELATEDASPECTS)

ENCOURAGINGTECHNOLO GYINNOVATION,ACCEL ERATING
TECHNOLOGYTRANSFER AND DRIVING PROGRESSOFSCIENCE,
TECHNOLOGY,ECONOMY ANDSOCIETY

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1. The times we are living in are characterized by rapid change and vigorous development in science and technology. The new science and technology revolution, featuring information-tech, biotechnology and nanotechnology, is pushing human development to a new stage. Each key scientific and technological breakthrough will have a profound influence on human production and their lives. The economic strength, quality of life, comprehensive national power, international competitiveness and status of one country or nation in the global political and economic framework depend as a general rule on the development and progress of science and technology. Invention, technology-innovation and technology-result-transfer are more highly valued by governments than ever before and appreciated by society as a whole.

2. The Chinese government has always attached great importance to scientific research, technology-invention and innovation activities. The Constitution of China stipulates that "the nation shall develop the cause of natural science" and reward the achievements of scientific research and technological invention. After 50 years of construction, and especially 20-plus years of reform and opening up, China has established a scientific and technological research system with relatively complete disciplines. Now China has more than 4,000 independent research and development institutions, 2,500 higher learning and scientific research institutions and 14,000 technology development institutions with corporate affiliations. More than 900,000 people are engaged directly in research and development activities. In 2000, the total expenditure on R&D of the whole of society reached 1.0 percent of that year's GDP at RMB 89.6 billion; it was in the leading group among developing countries. Ten percent of each year's 30,000 key scientific and technological results achievements are up to, or close to, an advanced level in world terms. Patent grants are on the increase: there was over 110,000 in 2001. The number of papers published by our researchers puts us in the eighth position in the world. The supporting role of science and technology in economic and social development is dramatically enhanced by the increasing improvement in the dissemination of scientific and technological results. In 2001, the trading volume of the tech-market exceeded RMB 75 billion; the total revenue of National High-Tech Industrial Zones for that year was RMB 1,200 billion.

3. Our country and people benefit greatly from the invention and creation of scientific and technological personnel. In the field of agriculture, we have cultivated over 5,000 new varieties and new hybrids. Key agricultural varieties have been replaced five to seven times nationwide. In particular, the technology-promotion of hybrid rice, plastic film covering, paddy non-irrigation growing and lower-density planting greatly improves grain output and helps solve the food shortage problem of a quarter of the world's population. The hybrid rice cultivated by world renowned hybrid rice expert Academician Yuan Longping has allowed grain output to rise to 100 billion over the past 20 years. Its promotion in many countries in Asia, Africa and America is contributing greatly to solving the world's food shortage.

4. In the industrial field, the implementation of practical scientific and technological programs has solved a great many critical and comprehensive technological problems in industry, allowed industrial equipment to be developed, disseminated a number of advanced achievements and supported technological renovation and key project construction.

5. In the field of high-tech research, based on research accumulated over the years, a large number of important achievements with great high market potential have come out and either already formed or promised the formation of major industries, including large-scale programmed-switchboard, high performance computers, industrial robots, bio-engineering vaccines, medicines and functional materials. The whole industry upgrade is driven by high-technology ventures like CIMS, clean production and participation in the study of the human genome.

6. The 21st century is the century of science and technology directed towards innovation. China has declared “vitalizing the nation through science and technology” and “sustainable development” to be its two basic development strategies. The implementation of an exercise in vitalizing the nation through science and technology began to be implemented with increased government input; national input allocated to high-tech R&D during the Tenth Five-Year Plan is double that of the previous 15 years. The programs include the Key Basic Research Development Program (Climbing Program), aimed at strengthening basic research, the National Natural Science Foundation to support the scientists in their own selected projects, the High Tech Research and Development Program (863 Program), and “Torch Program,” featuring the development of high-tech and its industries, the “Spark Program,” the “Key Science and Technology Achievements Promotion Program,” the “Technological Reform Program” and the “21st Century Agenda of China,” aimed at the sustainable development, and others.

7. In order to create a policy environment and society beneficial to invention and innovation, the National Technological Innovation Conference was held and the “Resolution on Strengthening Technological Innovation, Developing High Technology and Achieving Industrialization” was published in August 1999. A comprehensive policy system for the promotion of invention, innovation and technology transfer was established. It covers the whole process of technological innovation and industrialization, including essentially the following:

(a) The encouragement of more research input, to promote the development of a technology and innovation system for corporate orientation. A certain proportion of a company's R&D input can be deducted from its tax. The instruments and equipment imported by the scientific research establishment, enterprise or higher learning institution for scientific research purposes can be exempted from value-added tax, and can also benefit from partial or full exemption from customs duty; the depreciation of pilot equipment can be accelerated. From 1999 the Government began to set up the Technology and Innovation Foundation for Small and Medium-Sized Enterprises (SMEs) to support SME research and development. The foundation provides RMB 1 billion in allocations and RMB 2 billion in loans to assist the technological innovation projects of SMEs. The system further provides for reforms involving the conversion of State-owned sci-tech institutions into companies or their merger with other enterprises (or groups) to conduct technological development and application.

(b) The encouragement of the transfer of technology results to production areas. Reduction of the operating expenses of State-owned science and technology institutions in order to foster their market-oriented R&D and serve companies and society directly starting from 1985. The promotion and establishment of technology markets, the organization of technology transactions and a technology property right trading network that serves as a cooperative bridge between inventors, technology clients and investors; the encouragement of participation in technology results, the introduction of an invisible-asset evaluation system and provision for capitalization. The improvement of the intellectual property right (IPR) legal system, through publication and amendment of a set of IPR protection laws and regulations (Patent Law, Copyright Law, Computer Software Protection Regulation) that provide effective legal guarantees for invention and technological innovation activities. Income from the work of technology transfer, technology development, technology consultation and technology servicing enjoy exemption from both corporation tax and income tax.

(c) The encouragement of scientific and technical staff to make inventions and to apply and implement technological results. The Government has reformed the national scientific and technical award system, improved the income system for personnel working in science and technology and set up an income allocation policy that combines the key production factors of technology and management in order to show the creative value of technical staff. In order to award those individuals and organizations that make excellent contributions to the progress of science and technology and to stimulate their enthusiasm and creativity, the State Council has set up five State scientific and technological awards: the State Highest Science and Technology Award, the State Natural Science Award, the State Technology Invention Award, the State Science and Technology Progress Award, and the International Science and Technology Cooperation Award of the PRC. The aim is to reform and adjust State science and technology award policies, to reverse the tendency to value paper publication, to encourage applied results and patent applications; if science and technology staff transfer their professional findings, no less than 20 percent of the transfer income, or a proportion of no less than 20 percent of the value of the transfers should be given to the inventor and related staff. Technical staff should be allowed to leave and create their own businesses. To motivate certain high-tech enterprise employees, especially technical staff and managerial personnel who make great contributions, they are rewarded with a certain proportion of the added value from State-owned assets.

(d) The reform and improvement of the IPR management system in national science and technology plans. Except for projects that involve key national interests, the IPR of State commissioned projects will be given to the project institution, with the State reserving its free right of use; IPR protection forms part of the whole project management process in various State science and technology plans, and becomes an important content and evaluation indicator in plan management.

(e) The encouragement of the development of high-tech industry. In all, 53 State-level high-tech industrial development zones are to be set up, and enterprises carrying out R&D and production and operation work in high-tech areas with State encouragement are to be partly or even completely exempted from income tax. Reduced value-added tax is to be applied to high-tech products like software and integrated circuits. There are plans to create university science and technology parks, overseas students' parks, software parks, creation service centers and high-tech business incubators, in order to provide a better environment and service for innovation and the business of high-tech talent. Agency service organizations relevant to technological innovation are to be vigorously developed, including technological information advisory services, IPR evaluation organizations and technology transaction institutions; venture capital investment companies are also emerging to provide capital for technically innovative enterprises. The Chinese Government is preparing to create a second-level market to give venture capital investors a withdrawal channel.

8. Ladies and Gentlemen, respect for knowledge, science and talent is a traditional Chinese virtue. The encouragement of innovation and the protection of inventions is the consistent policy of the authorities. In today's climate of political stability and prosperity, the world of Chinese science is consciously taking the creation and development of advanced productivity as its own mission, serving modernization and construction as its own responsibility and giving human beings the benefits of science and knowledge as its calling. The Chinese Government is trying hard to create a machinery and an environment conducive to invention and innovation, good study and work programs, mechanisms, policies and environments that will enable excellent young talents to emerge; it will also advocate an

innovative spirit, the desire to be the first, to be brave and persistent and to fear no failure, and it will encourage the exploration of unknown worlds and objective truths.

9. The development of science and technology is a magnificent undertaking of the Chinese nation and of mankind as a whole. The Chinese nation created a splendid ancient civilization that relied on diligence and wisdom. Today, guided by the strategic thought that “science and technology are the prime productive force,” the Chinese science and technology sector is willing to join hands with foreign colleagues and all its friends to contribute to the brilliance of the 21st century.

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