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WIC Promotes AI for Public Benefit

By WANG Xiaoxia & WANG Yanbin

The World Internet Conference (WIC) "AI for Social Good" Programme was launched on June 26 during the WIC Nishan Dialogue, stating the WIC will work with governments, international organizations, welfare organizations, institutions, enterprises and others to establish a collaboration mechanism to promote AI-enabled public welfare projects worldwide. It will launch training courses in developing countries and strengthen publicity for AI-enabled welfare.

The participants shared their experience in AI applications in the field of public welfare. AI holds immense promise for developing countries, said Michael Campbell, the Nicaraguan ambassador to China, stressing that the progressive adoption of AI will require a greater degree of solidarity and cooperation.

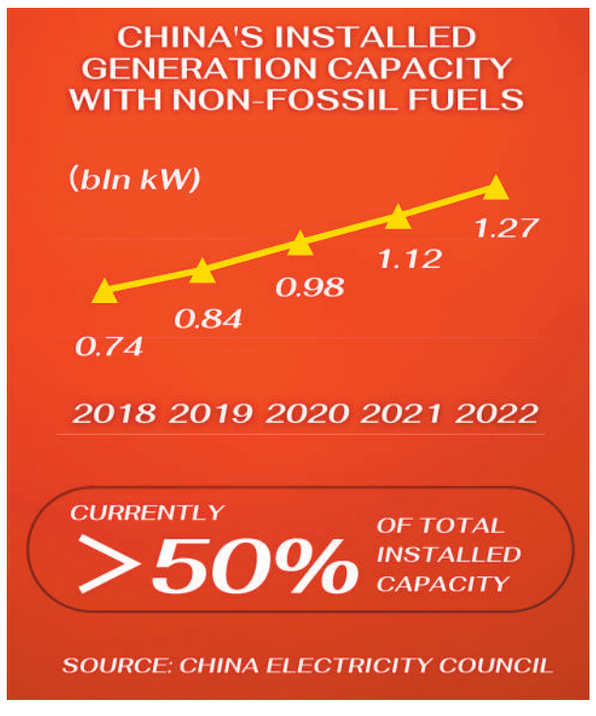
High-tech enterprises that play a major role in AI applications shared their experience during the dialogue. Microsoft worked with the Beijing Hongdandan Visually Impaired Service Center, a nonprofit educational institution that uses AI to produce audiobooks for the blind and teaches them skills to obtain jobs. Tencent has built a digital platform for snow leopard conservation that identifies species and analyzes data to assist in monitoring and investigation. This is expected to improve work efficiency by more than 50 percent.

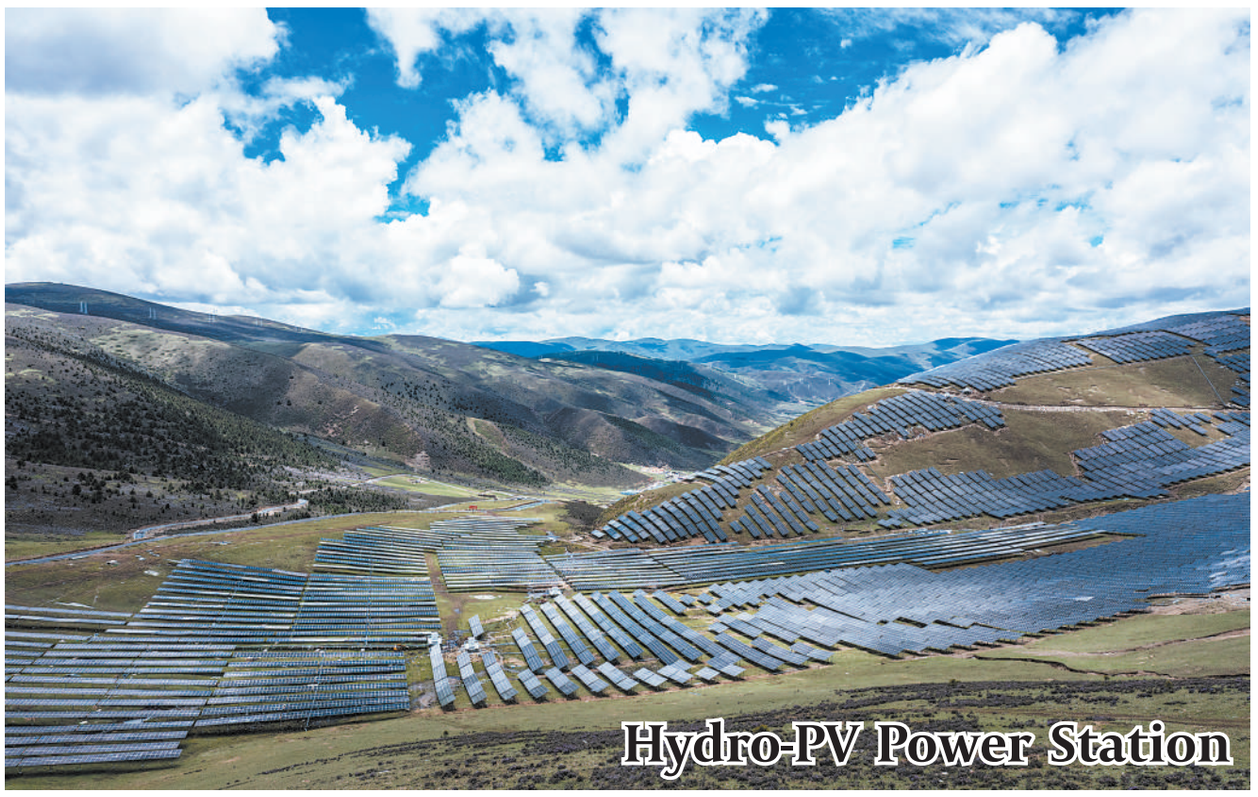
AI has the same pronunciation as the Chinese word ài (爱), which means "love." Perhaps it's no mere coincidence but a reflection of the value that technology should be deployed to resolve social and environmental problems and drive sustainable, equitable and inclusive development.

The WIC Nishan Dialogue on Digital Civilization, held in Nishan in Shandong province in east China from June 25 to 27, was attended by around 400 representatives from international organizations, enterprises and institutions to exchange views on building a digital world of exchanges, mutual learning and inclusiveness in the age of AI.

The World Internet Conference Nishan Dialogue on Digital Civilization is held in Qufu, Shandong province from June 25 to 27. (PHOTO: WANG Xiaoxia/S&T Daily)

New Graphic





As the world's largest and highest-altitude hydro-photovoltaic (PV) complementary power station, the Kela PV power station in the Tibetan Autonomous Prefecture of Garze, southwest China's Sichuan province, goes into operation on June 25. (PHOTO: XINHUA)

Editor's Pick

China's Drive to Combat Desertification

By WANG Xiaoxia

After more than 40 years of unremitting efforts, China has made remarkable achievements in the prevention and control of desertification, and achieved a historic transformation known as "sand advancing and people retreating" to "green advancing and sand retreating" in the key areas.

June 17 marked the 28th World Day to Combat Desertification and Drought. The importance of this day confirms that desertification and drought are among the greatest threats to sustainable development facing the world. In this regard, China's efforts to combat desertification have also contributed solutions to global desertification management.

Aerial seeding

A fleet of Y-5B aircraft loaded with seeds and flying in the direction of the desert, dropping its load to spread seeds of trees and grass into the vast arid land, is commonly seen in Alxa League, Inner Mongolia Autonomous Region. Alxa League is one of the 12 prefecture-level divisions in the administrative area of Inner Mongolia.

Aerial seeding, or the technique of sowing seeds by dispersing them through aerial mechanical means such as a drone, plane or helicopter, has been applied in Alxa for more than 40 years and has effectively curbed the advancing of desert.

Back into the 1980s when aerial seeding was first trialed in Alxa, the three deserts of Badain Jaran, Ulan Buhe and Tengger, stretched across the whole of Alxa, covering one-third of the total area, said Liu Hongyi, chief of Azuoqi forest station, adding that once the three deserts eventually joined together, the entire Alxa faced the risk of being swallowed by the desert.

To prevent this happening, staff workers in the past working without GPS have endured the surface temperature of over 50 degrees Celsius in the desert to locate the range of aerial seeding, and guided aircraft to the sowing area, said Liu.

By the end of 2022, the total afforestation area by aerial seeding has reached 6.89 million mu (around 0.46 million hectares), and two large sand-control shelterbelts with a total length of 460 kilometers and a width of 3 to 20 kilometers had been established on the eastern and southern edges of the Tengger Desert and the southwestern edges of the Ulan Buh Desert, effectively curbing their advance and expansion.

According to statistics from local government, over the past 40 years, the forest coverage rate of Alxa League has increased from 2.96 percent to 8.37 percent, and the coverage of grassland has increased from less than 15 percent to 23 percent.

Systematic upgrade of irrigation area

As one of the three mega irrigation areas in China, Hetao Irrigation Area in Bayannur, Inner Mongolia, has been used to divert water from the Yellow River for irrigation of farmland due to the lack of rain. ***See page 2***

World Access to Quantum Computing Cloud Platform

By Staff Reporters

The new generation quantum computing cloud platform with the potential to achieve quantum superiority, is now online and open to all users around the globe.

Providing the computing power service is a 176-bit superconducting quantum computer called "Zuchongzhi," according to the Center for Excellence in Quantum Information and Quantum Physics under the Chinese Academy of Sciences.

The platform was upgraded from the previous model Zuchongzhi-2 by adding control interfaces of 110 qubits, making the number of qubits that users can manipulate a powerful 176. The 110 qubits are coupling bits, which can enhance the control precision between bits to a large extent, according to Zhu Xiaobo, chief engineer of the project and professor at the University of Science and Technology of China.

Theoretically, quantum computers do have some advantages over traditional computers in certain aspects, such as computing speed, said Zhu.

Zhu emphasized that not all tasks can be performed by quantum computers and that they are more likely to supplement traditional computers. He added that it should not be the case of one replacing the other, but rather the two should be integrated.

Peng Chengzhi, executive vice-director of the project, said each quantum gate operation has an error rate, and the accumulated errors could make the result meaningless, so error correction is of great importance.

If a quantum computer is to be developed for general use, the error rate must be lowered, said Zhu.

Peng noted that even though they have made progress in error correction, it is insufficient, and one error happened in several million operations rather than in several hundred operations is what they aim for.

The cloud platform capable of error correction is hoped to be launched in about three years, said Peng.

International Cooperation

China, Croatia Biodiversity Conservation Ties Flourish

By LI Linxu

The First China-Croatia Dialogue on Science and Technology Cooperation on Biodiversity Conservation and Utilization was held in Chengdu on June 15, marking a milestone in the field of sci-tech cooperation and personnel exchanges between the two countries.

As the third event of China-CEEC InnoShare 2023, the conference was hosted by the China Science and Technology Exchange Center (CSTEC), and the Science and Technology Department of Sichuan Province, and organized by the China-Croatia Belt and Road Joint Laboratory on Biodiversity and Ecosystem Services, the Chengdu Institute of Biology, and the University of Zagreb, Croatia.

In today's world, it is only through upholding openness, inclusiveness, mutual benefit and win-win cooperation that we can better deal with global challenges, said Cui Zhimin, counselor of the Secretariat of Cooperation between China and Central and Eastern European Countries, adding that China is striving to build an inclusive and mutually beneficial international partnership, as well as an open, fair and pluralistic sci-tech development environment, so as to contribute more Chinese solutions for global sustainable development.

The sci-tech cooperation between China and Croatia is very constructive, said Staša Skenžić, head of Independent Sector for the Coordination of European Affairs and International Cooperation at the Ministry of Science and Education of Croatia, reaffirming his desire to further strengthen the two countries' sci-tech cooperation.

The diverse and multi-dimensional sci-tech exchanges and cooperation between China and Croatia has provided important sci-tech support for ecological conservation in biodiversity hotspots, said Zhuang Jia, deputy director of CSTEC, adding that the conference is expected to provide more wisdom on global biodiversity governance. ***See page 4***

WEEKLY REVIEW

A Binary Pulsar in a 53-minute Orbit Detected by FAST

FAST, China's Five-hundred-meter Aperture Spherical Telescope has discovered a binary pulsar with an orbital period of 53.3 minutes, the shortest known period for a pulsar binary system so far. The discovery, published in *Nature* on June 21, will help understand the evolutionary model of spider pulsar systems.

Shiyan-25 Space Experiment Satellite Launched

China launched its Shiyan-25 experiment satellite on June 20 to conduct mainly new Earth observation technology experiments. The launch was the 477th flight mission conducted by the Long March rocket series.

Scandium Superconductivity Discovered

A new record for the highest transition temperature of elemental superconductivity was produced. Scientists from two Chinese universities have discovered that elemental scandium has a superconducting transition temperature of up to 36 degrees Kelvin at high pressure. The results were published in *Physical Review Letters* on June 22.

China's First High-pressure Pure Hydrogen Pipeline Tested

China successfully completed the first high-pressure pure hydrogen pipeline burst test on June 25, laying the foundation for large-scale, low-cost and long-distance pure hydrogen transportation.

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