

## **Intervention Script for the 1st APT Web Dialogue**

### **China Telecom**

Coronavirus has affected our society, our economy and our telecommunication systems. The decisions we make in this period of time will contribute to the reshaping of the world for years to come.

As a telecommunication operator, we are not in the front line as doctors or nurses. Our advantages rely on our telecommunication infrastructure. We have more than 1 million 4G base stations, 75 thousand 5G base stations and 170 million broadband subscribers, and we have a close link to our customers, we are still providing on-the-spot service during the pandemic. Our goal is to transform technology into capabilities for continuous study, work, lives and epidemic prevention, to tens of thousands of households, shoulder the social responsibility by providing infrastructures and services both for health-care and for quality of life.

During the pandemic, the requirements for remote applications are increasing, especially health-care and education applications. Due to the lockdown, the network flow is increasing, about 20%, but the peak level of data consumption did not come close to the limit of the broadband networks, thanks to our continues construction of infrastructure and the compression technologies. We are developing a new video compression standard in MPEG, called Video coding for machines, which is expected to be very efficient and accurate. As a result we don't have significant drop of QoS for 4G, LTE, IPTV and SMS, etc. It should be noted that the international gateway is still a bottleneck we need to work on.

There is increasing need for VPN, Content Delivery Network, cloud servers, cloud computer, remote applications with novel requirements, like the virtual background I am using, which is nice, but I would also be delightful if Zoom provides beautifying and cloths changing function. We, China Telecom has developed more than 70 new applications for different regions and industries. Among them, I would like to give some details about hospital on cloud and track querying applications.

China has achieved a miracle by building a hospital in 10 days in Wuhan city. And we built them on cloud. All the medical systems and the information systems are deployed on cloud. The whole construction took 10 days, but we only took 3 days to deploy the network and cloud resources. The major business and information systems such as the hospital information system (HIS), laboratory information system (LIS), and picture archiving and communication systems (PACS),

are all on cloud, and so are the operation management, resource management, knowledge management, and customer service, including the queuing system, and all databases.

For one hospital, we have 7 dedicated cloud servers to support the services and applications, and we deployed the same type of services in different underlying servers, we designed host and backup databases, and backup the data timely to make sure the availability and reliability.

The benefits of hospital on cloud are IT maintenance in local is reduced, the deployment is accelerated, and we could simply replicate the solution to other hospitals.

An interesting thing is that we have launched a "24-hour HD live broadcast" of the construction of the two hospitals, the highest peak of online users exceeded 100 million. It is called the largest "cloud overseer" project. It's based on 5G network and our cloud platform. People are quarantined at home and cheering up for workers on-site remotely. We might have a new record.

Another major application is the track querying app, which provides the individuals subscribers with functions including regional risk query, epidemic situation forecast query, return to city report query, itinerary query and contact query.

On the basis of ensuring user privacy and safety, it conducts real-time perception of the flow of people in key epidemic areas, with cooperation with relevant provinces.

About 20 billion records of signaling and billing data were processed every day, covering all 2G, 3G, 4G users.

It also has a function of epidemic prediction and achieved the accuracy of 99.89% for the existing confirmed cases, and accuracy of 99.97% for the total confirmed cases.

Besides, we also have applications of temperature detection, mask recognition, unmanned business office, 5G UAV with thermometers and loudspeaker, etc.

Thank you very much. Please feel free to contact me at [zhangy666@chinatelecom.cn](mailto:zhangy666@chinatelecom.cn) if there is anything you are interested in.