

TeamViewer and Shanghai Fustech Open Up a New Era of Healthcare Services

With remote ultrasound surgery, leading telemedicine service provider increases medical efficiency and improves access to healthcare services.



As a leading telemedicine service provider, Shanghai Fustech offers Robot as a Service (RaaS) to hospitals through the 5G and AIoT edge cloud-integrated telemedicine system. The company is committed to building a telemedicine ecosystem consisting of manufacturers, hospitals, research institutes, financial institutions, and telecom operators. Thus, it aims to replace more traditional treatment methods with new digital telemedicine solutions.

TeamViewer Solution

Fustech adopts TeamViewer's remote connectivity solution to provide solutions for remote focused ultrasound surgery to hospitals. Doctors can now perform remote surgery in 5G network environment smoothly, which helps improve efficiency and access to medical treatment.

TeamViewer's remote connectivity solution and high-quality video image prove to be stable and reliable.

XU Liang, of Shanghai Fustech Co., Ltd.

Challenges

- ➔ Due to the unequal distribution of healthcare resources in China, patients from different regions of China often have to seek medical treatment in large cities. This situation puts a strain on the resources and environment in those cities and may prevent patients from receiving timely treatments. Therefore, telemedicine solutions are urgently needed.
- ➔ Given the limited amount of available medical devices and resources, doctors sometimes have to travel to another location to perform a surgery. It is necessary to improve the efficiency so that more patients can receive treatment.
- ➔ Medical procedures are demanding, and thus require remote-connectivity solutions to be stable, smooth, and offer high-quality images.
- ➔ As the network conditions in hospitals vary greatly, remote connectivity solutions need to be adaptive to the 5G network.
- ➔ Telemedicine solutions also need to meet the requirements of data security and reliability.

Results

- ✔ TeamViewer's technology brings low latency and high stability and performs well even in low-bandwidth environments, all of which enables doctors to operate remotely through a 5G network.
- ✔ Clear and stable transmission of image and sound, instant operational response, and security in data transfer make TeamViewer's remote connectivity technology an indispensable part of the one-stop telemedicine services of Fustech.
- ✔ According to the comparison of preoperative and postoperative conditions, the outcome of the remote surgery with TeamViewer technology does not show any difference from that of a conventional treatment.
- ✔ TeamViewer enables doctors and patients to overcome space constraints, doubles medical efficiency, improves access to healthcare services, and therefore benefits more patients.

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Guo Li, CEO of Shanghai Fustech Co., Ltd.



TeamViewer Facilitates the World's First Remote Focused Ultrasound Surgery

The cooperation between Fustech and TeamViewer began in 2019 when Fustech used TeamViewer's remote control technology to complete the world's first 5G remote focused ultrasound surgery. The doctor sitting in the control room of Shanghai International Medical Center remotely controlled the surgical equipment to operate on the patient lying in the operating room about 30 kilometers away, without any latency. The doctor blazed five uterine fibroids including the biggest of 4.8 centimeters in the patient's uterine by clicking with a computer mouse. The surgery was highly successful.

Focused ultrasound surgery is non-invasive. The patient neither bleeds nor needs anesthesia. FUS surgery can keep the normal organs and tissue intact. After over two decades of clinical application, it covers more than 130 adaptation disease such as tumor, gynecology, and urology. At present, the surgery uses digital ultrasound equipment, which is suitable for remote operation. Fustech installs TeamViewer remote connectivity solution in the surgical equipment to enable doctors to perform surgery remotely through a 5G or stable high-speed network.

Through a large number of in-vitro experiments, argumentations by the ethics committee, and adequate risk assessments, it has been proven that remote surgery is safe. Because of the unique feature of focused ultrasound technology, the surgery can be performed remotely and safely, hence the success of the world's first remote focused ultrasound surgery.



Telemedicine Makes Healthcare Services More Accessible for Patients

To date, four hospitals have successfully performed a total of 15 remote-focused ultrasound surgeries using Fustech solutions with the support of TeamViewer technology. The successful development of remote surgery not only helps to maintain the health of patients but also doubles the work efficiency of doctors. For doctors, on the one hand, it allows them to save much time spent traveling between departments or even different cities. On the other hand, with optimized steps of remote surgery, a doctor can perform four operations within one hour, which improves efficiency by more than three times and makes it possible to treat more patients. Patients in remote areas no longer have to travel to hospitals in first-tier cities to get better treatment. Remote surgery saves them the tiresome trip and enables them to receive timely treatment. It is significant for eliminating inequality in the distribution of medical resources in China.

“TeamViewer’s remote connectivity solution and high-quality video image prove to be stable and reliable. We enjoy working with TeamViewer, and the remote operations have been carried out smoothly, without any major issues or difficulties. A partner like TeamViewer puts our minds at ease. We will definitely recommend TeamViewer to other partners that look for remote control technology”, commented XU Liang, CTO of Shanghai Fustech with satisfaction.

Focused ultrasound technology represents the trend of the healthcare sector in the future. As the technology expands its scope of application and increases its maturity, remote surgery will also develop, adapt or even replace conventional surgery. With the application of 5G remote surgery, doctors and patients break through the spatial limitations. It is an effective solution to the issue of inaccessible and unaffordable medical treatment, providing inclusive healthcare and benefits to more patients.

TeamViewer’s Proven and Stable Performance is the Foundation of the Partnership

TeamViewer plays a decisive role in the focused ultrasound technology. Its proven remote connectivity solution enables successful remote surgery and makes the services more available to patients. Its low latency, high stability, and clear image and sound transmission help doctors smoothly perform the surgery. According to the comparison of preoperative and postoperative conditions, the outcome of the remote surgery does not show any difference from that of conventional treatment.

To ensure stable remote connectivity during operation, Fustech conducted several comparative tests to find the right telecommunication and remote control technology that guarantees the surgical operation while being network-adaptive. “Before choosing TeamViewer, we compared four to five remote control software providers by conducting extensive experiments, strict screening, and evaluation tests. We concluded that TeamViewer offers the highest bandwidth efficiency as well as stability. TeamViewer also delivers the best picture quality with the same bitstream and good remote-control experience, which is crucial for remote surgery. As a result, we finally chose TeamViewer’s solution.” said Guo Li, CEO of Fustech. TeamViewer has become an indispensable partner of Fustech for its comprehensive solutions, providing strong technical support for its remote surgery.

TeamViewer’s remote-control solution is critical for us to provide remote focused ultrasound surgery service to hospitals, ensuring smooth surgery and making the services more readily accessible to patients. TeamViewer is an indispensable partner in our comprehensive solutions for hospitals. It brings us strong technical support in remote focused ultrasound surgery.

Guo Li, CEO of Shanghai Fustech Co., Ltd.

About Shanghai Fustech

Shanghai Fustech Co., Ltd. is a leading telemedicine service provider, and offers Robot as a Service (RaaS) to hospitals through the 5G and AIoT edge cloud-integrated telemedicine system. The company is committed to building a telemedicine ecosystem consisting of manufacturers, hospitals, research institutes, financial institutions, and telecom operators. Thus, it aims to replace more traditional treatment methods with new digital telemedicine solutions.

About TeamViewer

As a leading global technology company, TeamViewer offers a secure remote connectivity platform to access, control, manage, monitor, and support any device – across platforms – from anywhere.

With more than 600,000 customers, TeamViewer is free for private, non-commercial use and has been installed on more than 2.5 billion devices. TeamViewer continuously innovates in the fields of Remote Connectivity, Augmented Reality, Internet of Things, and Digital Customer Engagement, enabling companies from all industries to digitally transform their business-critical processes through seamless connectivity.

Founded in 2005, and headquartered in Göppingen, Germany, TeamViewer is a publicly held company with approximately 1,400 global employees. TeamViewer AG (TMV) is listed at Frankfurt Stock Exchange and belongs to the MDAX.

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