

## Safety Management of the Teleconference System

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**Abstract.** The teleconference system has the characteristics of large-system, big-scene, and high-profile. To find the regularity and experience of the teleconference system, not only can change the current passive situation on the security situation of teleconference system, which reduces security risks, but also enhance the capacity of respond to emergencies considerably, which standardize the operation management, and entrench the safe performance.

### Introduction

The teleconference system is an interactive multimedia communication services, which integrates voice, video, image and data services. This system makes voice, video, image and data transported distantly.

Using this system, people at distant locations can hold a meeting, seeing and hearing each other and even writing on a shared virtual blackboard, improving the tone of meetings. The teleconference system for Henan electric power company is mainly responsible for taking video conference and broadcast conference [1].

At present, the executive teleconference system covers 18 power supply companies, 12 second tier organizations and 52 electric power plants.

The existing systems adopt Multipoint Control Unit (MCU) KDV8000A and high-definition video conferencing terminals KDV8010A to access by 2M and MCU concatenated, the functional structure of teleconference system is as Fig.1.

The teleconference system for State Grid Corporation of China is a large and complex network to provide special high level and large scale teleconference service, has the characteristics of large-system, big-scene, high-profile.

How to manage this system is a difficult ordeal for a collective. To find the regularity and experience of the teleconference system, not only can skill at riding the system, but also can extract value from them, which is the decisive element for conducting the other work successfully.

### Principle of Emergency Management

**The first Principle is Ensure the Smooth Conduct of the Meeting.** Deal with the emergency management, make the ensure the smooth conduct of the meeting, minimize incidents caused by interruption of the meeting.

**Principle from Key to Minor.** If there are emergency, which can't avoid meeting to be interrupted, the rob order is from the home meeting venue to other, from production unit to non-production one.

**Principle from Rob to Repair.** If there are emergency on teleconference system, adopt the way of temporary repair meeting, and the rob in the process of accident prevention scope to further expand [2]. And then make analysis of the fault after the meeting, and do complete restoration function for the system.

**Switch the Sound from Conference to Teleconference System When There Are Trouble which Affect Sound or Fault Handling which will Affect Sound.** When the trouble is over, return to the original works.

**The Principle of Unified Leadership and Decentralized Administration.** The emergency prevention and treatment work could be carried out with the principle of unified leadership and decentralized administration under the unified leadership of Henan province electric power company.

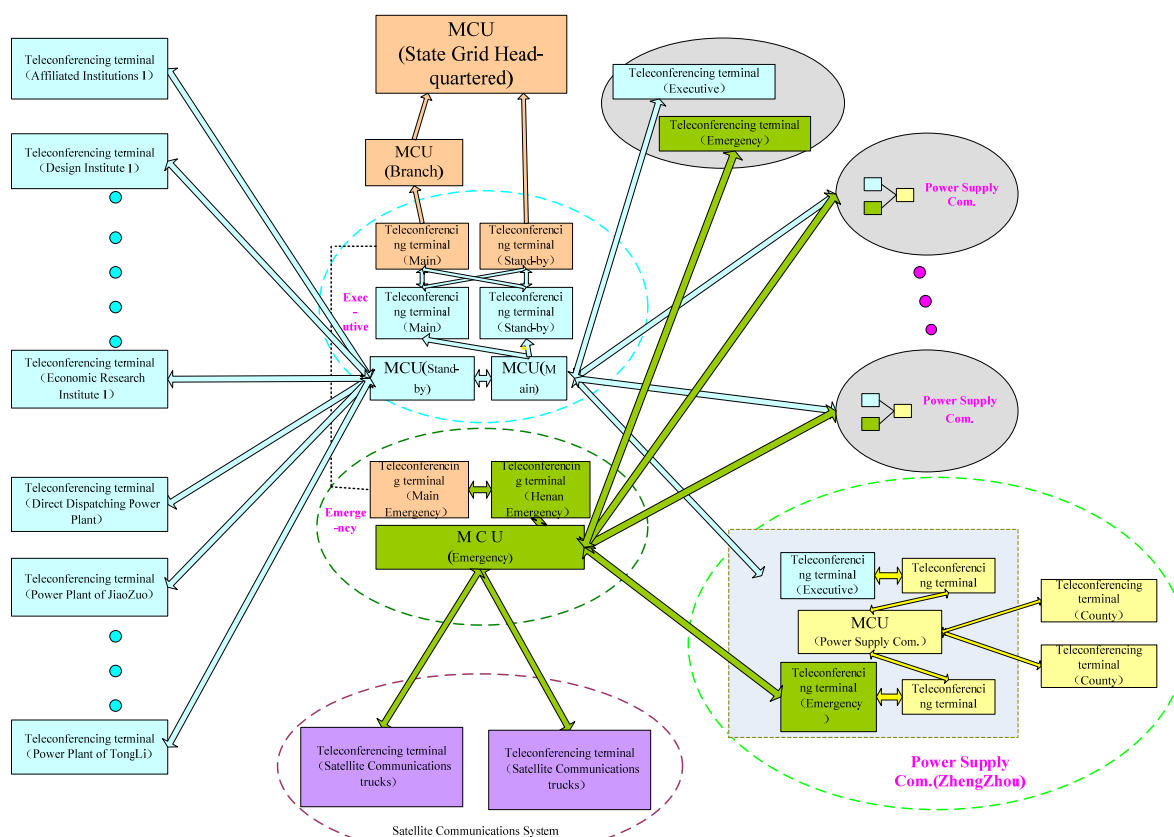


Fig.1 The functional structure of teleconference system

## The Earlier Disposition

An initial investigation on the reasons of event shall be ready for any emergency issue, avoid the fault expanded caused by blind fuck. People who received the report of the emergency management shall do analysis of events. If the events can be deal with independent, do it and report. If the events cannot be independent processing, shall notify the other technicians to assist processing promptly.

Maintain normal operation of other devices as far as possible, prevent new emergency to carry out.

If the teleconference system cannot run normally due to meeting transmission channel interrupt, the operators should organization circuitous route as soon as possible, and then issue a temporary operation mode.

## Safety Management

Whether standard definition or high-definition, the teleconference system should service for the company at important activities held by the system[3]. And so, safe and reliable is always first. The safety management of teleconference system is the key of the power communication safety production management, and is as important as the safety of power grid relay protection and safety control channel management.

The safety management of teleconference system is a high-tech work, the basic idea is as follows.

Do in-depth analysis the dangerous points that may affect the safety of teleconference system, such as interruption of transmission channel, failure of network equipment, failure of local device,

power failure, etc., and then carry out a targeted security measures and make contingency plans to avoid problems at most. If there is a problem, start the emergency plan immediately, ensure the meeting continued. There are both connection and difference between Safety measures and emergency plan. Security measures refers to allocate corresponding resources and to carry out the corresponding plan and arrangement according to the dangerous point analysis and specific conditions of the system.

Some safety measures exists from beginning to the end, and some will only need to enable in case of an emergency. A certain safety measures may be able to deal with a variety of emergency, but a variety of security measures may be used to deal with a certain emergency. Contingency plans focus on primarily what security measures should be taken out and how to carry out these measures (procedures, steps, methods, etc.), and who will be responsible for the implementation (command people, performing party, party, etc.) [4]. If there is not clear concept among them, real effective safety measures and emergency response plans are unlikely to make up, and so, safety management has become a hot air.

The operation maintenance personnel should sign with host department before every meeting, do system debugging according to the arrangement of specification for each venue image and sound quality for review, and inspection on safety measures to carry out the situation. At the same time, according to the important degree of the meeting, the anti-accident exercises shall be organized to familiar with the specific safety measures and emergency operation. After the debugging, one should submit commissioning report and confirmation and must feedback timely and clear.

In recent years, we do a lot of research work in the teleconference system security management, and implement the following security measures in accordance with the requirements of the SGC.

### **Process of Emergency Handling**

When there are emergency on teleconference system, operation maintenance personnel should report to the emergency treatment of command group leader and relevant personnel immediately, and carry out accident treatment work according to the accident disposal situation.

When receiving emergency information, the command group leader and relevant personnel should arrive on the emergency disposal battalion to carry out corresponding emergency treatment work immediately, and arrive on the scene to command coordination if necessary.

According to the seriousness of the situation, status and nature events, the command group leader report to the superior emergency treatment leading group by regulation. At the same time, the leader carry out organization, command, and coordination of emergency management work according to the scene disposal plan.

After the on-site emergency disposal on meeting, the emergency workers need to confirm the teleconference system has been restored to normal operation and been stable operation of 30 minutes, which means that the hidden danger of security has been ruled out completely. And then the emergency workers could apply over the scene emergency disposal procedures, and could leave after approval [5]. If there are meeting interrupted due to emergency, operation maintenance personnel should organize alignment for all venue. When the system run without fail smoothly more than 30 minutes [6], the problems have been seen as ruled out completely, and could apply over the scene emergency disposal procedures.

### **Conclusion**

Safety management has changed the passive situation of the security situation on the teleconference system, the hidden danger of security has been reduced seriously, ability of responding to emergencies, system control and the complex and changeable situation has been improved significantly, operation management has been more standardized, the whole security obviously improved, and then the foundation of safety work more solid. The main purpose of summarizing the experience is to improve the organization-leadership skills and the ability to work independently. Only in this way, the safety management work can strengthen, to eliminate things which shouldn't

have happened.

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