**Environmental requirements for professional video conferencing systems**

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Power requirements:

The equipment power is 220V AC;

The electricity used by the equipment is separated from the electricity used in the field lighting;

The electricity used by the equipment is separated from the electricity used in the field air conditioner;

Equipment power is separated from other high-power equipment;

The equipment power outlet should be fixed.

Ground wire requirements:

The ground and neutral lines should be separated;

The potential difference between the ground line and the neutral line is less than 0.3V;

The ground wire is well grounded;

Other equipment connected to the conference television equipment should be shared with the equipment.

Network configuration and interface requirements:

The interface between the HUB and the switch is the same, and the mode is duplex or half duplex. It is forbidden to set one interface to half duplex and the other interface to duplex.

The interface between the HUB and the router is the same, and the mode is duplex or half duplex. It is forbidden to set one interface to half duplex and the other interface to duplex.

The interface between the router and the switch is the same. It is duplex or half-duplex mode. It is forbidden to set one interface to half duplex and the other interface to duplex.

The production of the network cable follows the standard requirements, so that the coupling phenomenon does not occur and the long cable is working properly.

The network interface should pass the packet loss rate test.

Lighting requirements:

Light lighting is moderate;

The color temperature is between 2700K and 3400K;

When exposed to natural light, semi-transparent and fully enclosed curtains shall be provided;

Lighting lighting group controllable;

It is recommended to refer to the TV camera lighting technology.

Temperature and humidity requirements:

Working temperature: 0-40C Humidity: 10-90%

Temperature in non-working state: -20-60C Humidity: 10-90%

TV, rear projection or projector requirements:

Each large conference room type device needs to be equipped with 1 or 2 TV sets, rear projection or plasma display with S-Video terminal or composite terminal. One of them needs to support the XGA input interface. The TV is recommended to be 34-inch or more 100MHz flat, the rear projection is preferably above 75MHZ, and the projector is preferably 3000 lumens or more.

Note: The network topology map should be provided at the installation site for the construction personnel to inquire when necessary.

Meeting room requirements:

The video conferencing system is a system for transmitting conference images through digital television technology to realize meeting, teaching and medical treatment in different places. Due to the strict environmental requirements of the key equipment in the conference television system, the layout of the remote conference room/classroom is very important in the whole system.

The rational design of the conference room/classroom is an important factor in determining the image quality. The overall design idea should meet the following requirements:

The layout of the conference room/classroom should be generous and simple, which can realistically reflect the scene characters and the conference environment, so that the participants have a sense of presence and unity to achieve good results in visual and language communication.

Images transmitted in remote conference rooms/classrooms, including people, scenes, graphics, text, etc., should be legible.

The temperature, humidity and air circulation of the meeting room should be kept in the remote conference room/classroom to make the participants feel comfortable and natural.

Remote meeting room location and size requirements:

(1) Remote conference room location requirements

a. When a remote conference room is combined with an office building or other building, it should form a separate part and be isolated from other parts to prevent unrelated personnel from entering.

b. The conference TV room should not be arranged on the street side. If it is on the street side, noise prevention should be considered.

c. Try to choose the room next to the remote conference room as the control room, with an area of about 18 square meters. The partition wall between the control room and the remote conference room requires a glass window to allow the staff to observe the venue from the control room.

d. The control room should be equipped with a small monitor for the staff to monitor the image and sound effects.

(2) Remote conference room size design:

The size of the remote video conference room is not limited to the size of the customer. It is good to choose the appropriate display device according to the size of the conference room.

Requirements for a remote conference room environment:

The remote conference room environment includes lighting, noise, temperature, humidity, and more.

(1) Lighting requirements:

Illumination of the lamp is a basic requirement for the remote conference room. Due to the uncertainty of the lecture/meeting time and the special requirements of the camera system for light, the artificial light source should be avoided as much as possible to avoid natural light. The doors and windows of the remote conference room should be covered with dark curtains. If people are sitting in the bright light of the conference room, there will be little or no light on their faces, and bright lights will also cause visible shadows on the face. Therefore, the arrangement of the lights must be reasonable, and the human vision of the light source should have no adverse effects (no glare), and the light should be evenly distributed on the human face. Practical experience, the three primary color lights work best. The color temperature should be around 3200K.

The remote room illuminance requirements are as follows:

a. In order to ensure the color of the image and the white balance of the camera, it is stipulated that the light shining on the face should be uniform, and the illumination should be no less than 5 Lux.

b. In order to ensure the clear writing of documents and charts, the illumination of the chart area of the document is not less than 7 Lux.

c. It is recommended that the three primary lights be spaced between 0.8 and 1.2 meters and the power is 30 to 40W.

d. It is recommended that the shooting area, file chart area, monitor display area, and lighting group control, the lighting of each area is best divided into 2 to 3 groups, which can be controlled separately.

(2) Layout requirements:

In order to ensure the viewing effect of the image and prevent the "glare" or "reflective" effect of the color on the person's camera, the background wall should adopt a single uniform light color (but not white), so that the video signal level generated is approximately 0.35V. The other walls, tablecloths, carpets, ceilings, etc. of the conference room should match the background wall, and the background wall should not be used. It is recommended that the tables, chairs and walls be in beige or light cyan. Chairs should not be sofa-style, nor should they be used with high backrests to avoid blocking the participants behind.

(3) Noise requirements:

The remote room environment noise level requirement is 40dB(A). It is recommended that the air conditioner be split to reduce noise.

(4) Temperature requirements:

The remote room temperature is recommended to be between 18 and 22 degrees Celsius.

(5) Humidity requirements:

The humidity of the remote meeting room is recommended to be between 60% and 80%.