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Analysis of the professional or corporate video communication systems available today

***Preliminary considerations on the project of a corporate
video communication network***



The panorama of today's video communication

- Today there are several opportunities to choose the system to be used to make video communication in the company.
- *In recent years, three methods or guidelines have emerged that allow this to be done*
 - 1) That of the professional sector where communication is encrypted, and there is compatibility between the devices of different manufacturers that respect the ITU (International Telecommunication Union) protocol. Where the same protocol defined the different possible ways to make multiconference.



- 2) That of the semi-professional sector that uses a proprietary protocol of the various promoters such as that of Microsoft Lync which has become Sky for Business and is now being changed towards Teams as can be seen below from the declared evolution of Microsoft for Collaboration



- 3) That of Google chrome with WebRTC which allows easy access to anyone. However, applications that are not compatible with each other and not even with professional systems.

The panorama of today's video communication

- 1) In recent years, new methods of communicating have been highlighted, mainly dedicated to the end user and therefore defined for "the civil sector"
- 2) That of the civil sector where the birth of proprietary applications allowed to make Videoconference or Webconference, with one's own PC
 - a) *these applications are not encrypted and are not compatible with each other nor towards the professional or semi-professional sector*
 - b) *they can make Multiconference calls only with some protocols and only, relying on external Cloud services.*
 - c) *They always use a PC or a Smartphone on which a specific application is downloaded.*
 - d) *They are generally not encrypted*
 - e) *However, they allow invitations to be sent to remote users to whom, by clicking on the link, the correct application will be downloaded which will allow connection.*

Some of the Civil applications available for videoconferencing



The panorama of video communication via the Cloud

- Another aspect to keep in mind when evaluating which solution to adopt for your organization, especially if you need to connect multiple users at the same time, is the use of multi-connection services in the Cloud.
- The service proposed by different organizations essentially allows video communication to be made to several contemporary users by relying on these services.
- Many of these also allow access with different protocols and made compatible by the platform that manages the service. They typically allow access to ITU systems, with Teams and even WebRTC



- Some do not accept professional protocols but only users who use PCs and the application is proprietary but can easily be sent as an invitation to those who want to meet. They generally don't have encryption.
- At the moment nobody is able to accept all the existing protocols only our solution developed in synergy with Yealink allows this possibility with an apparatus called Global SKOD1804 and that we can configure according to customer needs.
- It is able, using a specific Yealink coding process, to replace the service in the Cloud, when concrete Internet connection bandwidth capacities are present, accepting up to 24 simultaneous users connected with different protocols.

Multi Protocol & Format Interchange Gateway SKOD1804 for Global Videocommunications



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The solution of the Multiprotocol Format Interchange Gateway SKOD1804

- With the advent of the multiple video conferencing or web conferencing platforms that use proprietary protocols that, not only are not compatible with each other, but not even with the professional protocols regulated by the ITU (International Telecommunication Union), four problems arise:
 1. **How to use the existing professional equipment in company meeting rooms, which generally have excellent quality, but which do not adapt to new proprietary applications**
 2. **How to connect your own meeting room with these users or attend conferences where you are invited.**
 3. **Maintain the multi-connection capability present in many meeting room codecs towards its users and at the same time accept invitations from other meetings with non-standardized protocols.**
 4. **For security and protection reasons, how separate the professional connection on the company internal network from that to civil users.**
- To solve these types of problems we have developed a Global Gateway device that achieves the proposed objective of connecting the world of professional video communication with the civil and web conferencing modes.
- The SKOD1804 device fully meets the needs, it is simple to install and configure



The solution of the Multiprotocol Format Interchange Gateway SKOD1804

- **How it works**

- The system uses a double digital processor each dedicated to the connection between the two connectable networks where the users to be connected are located, but which can be the same LAN
- One side of the Skod1804 gateway will be connected to the primary network where the ITU-compliant codec is located to which it connects with the SIP or H323 protocol respecting all the specifications of the standard, including AES 128-Bit encryption and graphics management in H329 or BFCP
- On the second side of the Global Gateway, the most common Web conferencing applications are preloaded and to give the possibility to load the appropriate application to allow you to connect the user you want is left deliberately open.
- The configuration of the SKOD1804 Global Gateway excludes any technical interaction between the two networks and not even between the protocols used
- The transfer of the signals takes place towards an intermediate protocol in the digital world so that it does not suffer from loss of quality or latencies.
- The management of the Global Gateway is done by an external PC or notebook from which complete management is allowed with the use of an Anydesk application.
- This allows you to place the apparatus where you typically want it in the server room or in the same video conference room and controllable from where you want.



The solution of the Multiprotocol & Format Interchange Gateway SKOD1804



Skod1804 MP&FI Global Gateway

Personal note book used as remote control via AnyDesk to the desired protocol



LAN A corporate protected

LAN B auxiliary Web

The apparatus is presented in a 2U Rack container

Equipped with front access to the ignition buttons protected by a key

In the back there are the connections of the two LAN networks A and B

A single power socket is available on the back with switch and protection fuse

The apparatus was created specifically for inclusion in the Company's local server or directly in the meeting room and takes advantage of the continuity power supply and the IT protections already present.

Control and configuration takes place only through Anydesk and therefore not there are Keyboard and Mouse and not even Preview monitor-

The costs are substantial but the advantages that it brings are priceless

Some of the best known protocols or solutions of Video and Webconference



Skod1804 MP&FI Global Gateway



Some of the most common proprietary Web conferencing protocols that can be used



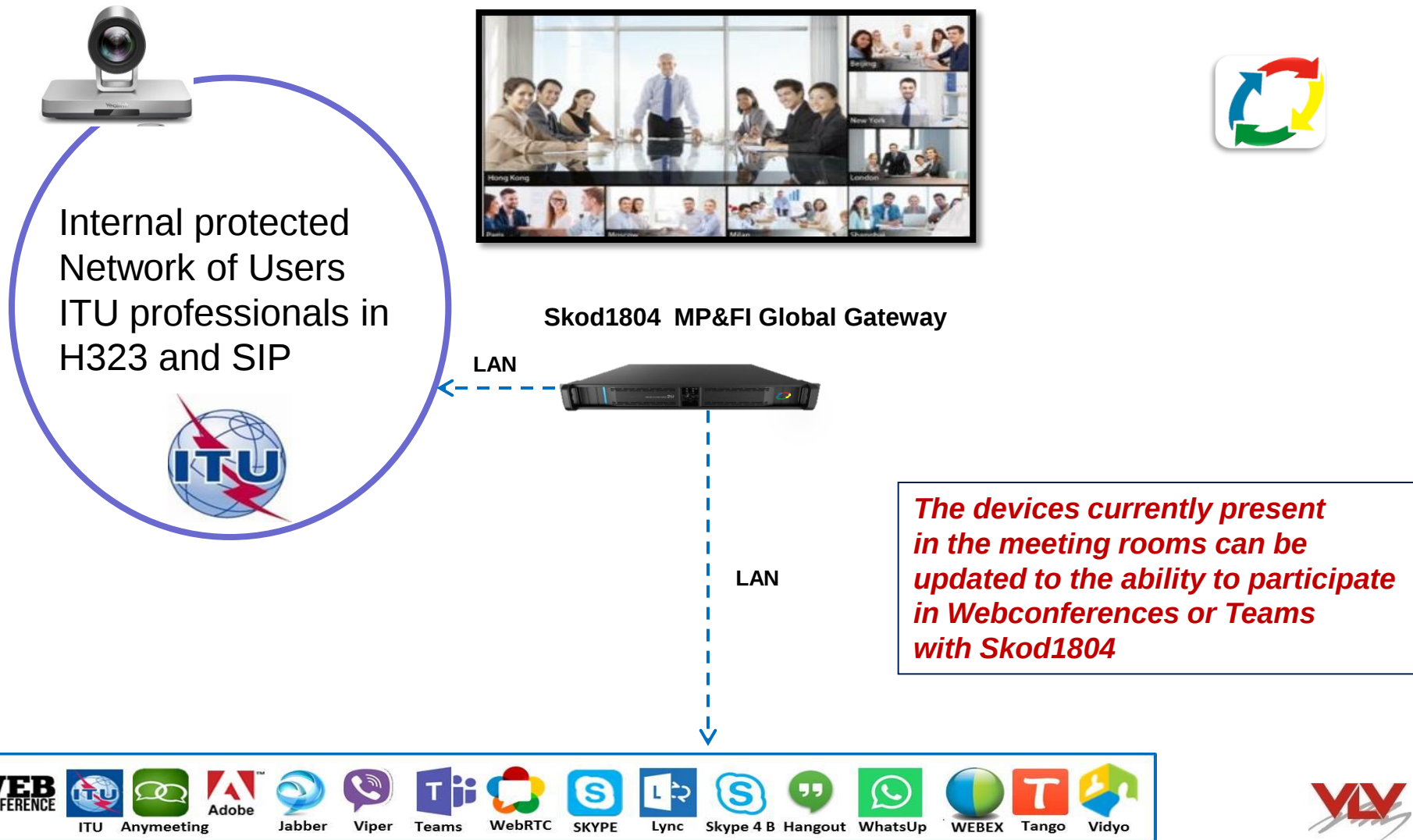
Other conference meeting protocols compatible



Some of the most common compatible multiconference clouds



Typical connection of the Skod1804 on IP networks



Global connection capability with Skod1804 and its own codec for Teams



Skod1804 MP&FI Global Gateway



How to extend the connection capabilities of Yealink VC800 with an Internal Cloud

A Bridge session to 8 users

Who is talking now



H323

SIP

Web RTC

Skype 4 Business
or Teams

B Bridge session up to 16 users

Yealink VC880



SIP

H323

H323

SIP

Webex

VOIP

Zoom

SKYPE Consumer

Example of possible connection with the Codec YEALINK VC880 in Cloud configuration and three Skod1804 Gateway for a total of 24 users can be connected simultaneously or on two separate ones Multiconference and Multiprotocol sessions

The total number of connectable users including the caller is 24 distributed as desired



Solutions and systems to communicate



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