CSoIP - VOICE COMMUNICATION SYSTEM
secure communication

CS

La force de l'innovation

CSOIP: RELIABILITY AND HIGH AVAILABILITY

CSoIP is engineered from a decentralized and redundant architecture ensuring the highest availability level (above 99.999%).

Our VCS solution is built from robust design made of safe and sustainable technologies in adequacy with the most demanding software development quality processes (SWAL 3).

Besides, CSoIP meets security and quality requirements in force in aeronautical community (ESARR 4 expertise) and passes successfully the most demanding performance tests.

In a nutshell, our VCS offers excellent performances while providing users with a trusted and secure environment in which they benefit from reliable communication operations.

CSOIP: SCALABLE AND FLEXIBLE SYSTEM

CSoIP system fits any control center configurations (tower, approach, en-route) as main system as well as back-up solution or last resort unit.

Moreover, our VCS product benefits from built-in gateways modules to bridge the gap between innovative IP technology and legacy existing non-IP radio and phone equipment.

Due to increasing airline traffic, control systems are meant to evolve to cope with activity growth.

CSoIP modular architecture allows you to scale your capacity up to 240 working positions to meet potential growth needs.

CSoIP totally fits the characteristics of your control center and anticipates cost effectively its development.

COMPREHENSIVE FUNCTIONALITIES

The high tech touch input device is the cornerstone of the system; it allows users to easily and quickly manage advanced communication capabilities in radio, telephony and intercom fields.

On top of that, CSoIP provides a comprehensive set of functionalities to comfortably deal with any kind of situation experienced by air traffic controllers. Some of product assets also facilitate management of workload fluctuations faced by air control centers.

CSoIP product perfectly covers strategic Air Navigation Service Provider (ANSP) needs by offering an optimized working environment matching controllers tough operational expectations.

CSOIP: ENHANCED USER EXPERIENCE

CS main target is to offer an intuitive and ergonomic user-friendly framework environment. We gave top priority on simplicity and ease of use to provide a VCS solution enabling undisturbed operations through adapted command protocols.

This is why CS has developed the most intelligible graphical interface tailor made for air traffic controllers specific requirements to control the overall system.

On top of that, CSoIP enables the possibility to adjust HMI according to your needs in order to interact with the system with optimized actions flow.
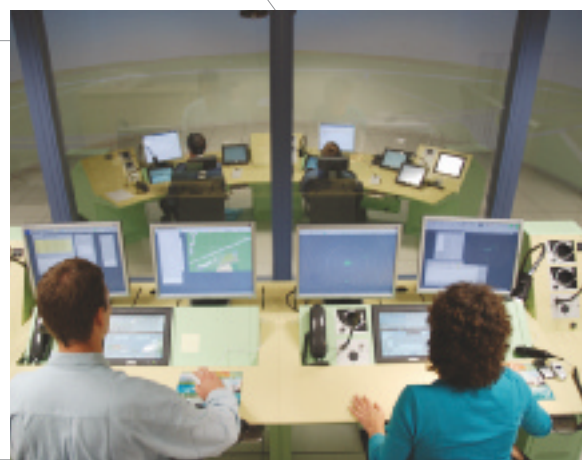
CSoIP product takes advantage of valuable CS teams experience in touch screen interfaces field ensuring to controllers, supervisors and technicians operating on it, the best user experience.

APPROPRIATE OPERATIONAL AND TECHNICAL MANAGEMENT

CSoIP offers a smart supervision / configuration tool that splits operational and technical aspects for a finer and more effective management of your control center activity.

Operational supervision allows dynamic assignment of roles and missions in a simple and coherent way to anticipate workload fluctuations. In parallel, technical supervision constantly reports global system current state in real time.

Statistical data export is also supported for improved monitoring purposes and to enhance the overall activity control. CSoIP also facilitates data exchange with external supervision to feed your hypervision center.

SUPPORT PACKAGE

CS ensures close follow-up of its products and bring relevant support. According to your needs, customized product maintenance is guaranteed over periods exceeding 10 years. A dedicated department is responsible for delivering personalized high valued services in the fields of engineering, expertise and consulting in order to maintain your product at its best level and assist you whatever your needs.
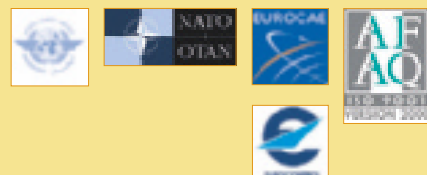
CS supplies long term technical assistance on several levels (hotline, on-site) and ensures training for optimal use of CSoIP product.

CS commits to providing you with sustainable high quality product set along with associated services.
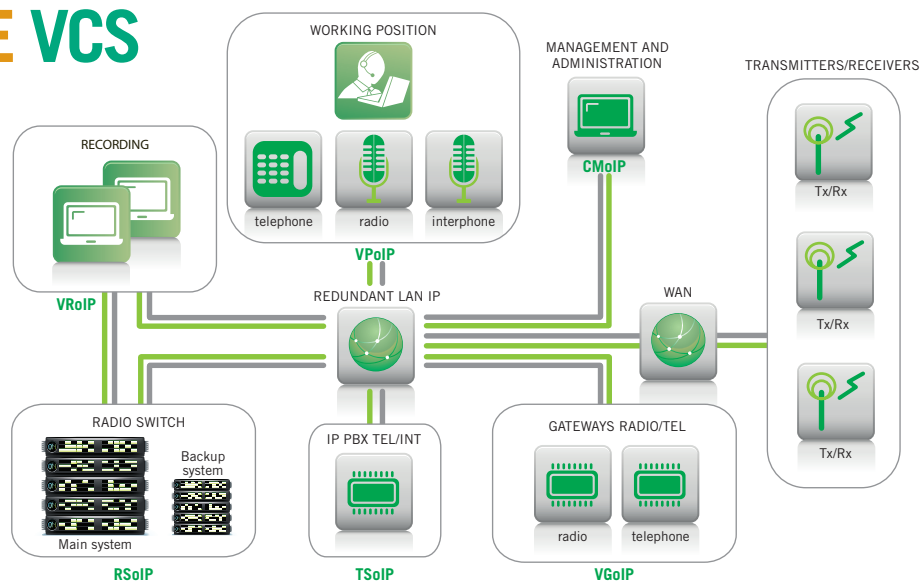
PARTNERS&REFERENCES

STANDARDS

ARCHITECTURE VCS

WORKING POSITION

telephone radio interphone

VPoIP

MANAGEMENT AND ADMINISTRATION

CMoIP

TRANSMITTERS/RECEIVERS

Tx/Rx

Tx/Rx

Tx/Rx

RECORDING

VRoIP

REDUNDANT LAN IP

WAN

RADIO SWITCH

Backup system

Main system

RSoIP

IP PBX TEL/INT

TSoIP

GATEWAYS RADIO/TEL

radio telephone

VGoIP

• CSOIP • ED-137 COMPLIANT •
HIGH AVAILABILITY LEVEL (>99,999%)

RSoIP
Radio Switch over IP
- Control of mono and multi-frequencies transmitters ED 137-1
- Up to 28 frequencies exploitable on one single working position
- Rx, Tx and coupling functionalities
- Management of advanced features CLIMAX, BSS (Best Signal Selection)
- Management of ATIS–RAIZ functions

VGoIP
Voice Gateway over IP
- Radio and telephone Gateways
- Interface with analog radio IP links according to ED 137.
- Management of 1 to 4 transmitters / receivers per Gateway
- SNMP MIB management

VPoIP
Voice Position over IP
- Integrated radio-phone-intercom based system
- Optimized touch screen device
- Screen available in 8, 10, 12 and 15 inches or more
- Adaptable HMI
- Audio management over handset, headset and speakers
- Immediate sound replay

CMoIP
Communication Manager over IP
- Dynamic configuration of missions and roles
- Open solution able to be connected to hypervision centers
- Separation of operationnal and technical management
- SNMP MIB management
- Efficient user right managment system

VRoIP
Voice Recorder over IP
- Analog, digital and IP (acc ED 137-4) recording
- Records search engine
- Wideband interface for encrypted recording
- Synchronisation on reference clock

TSoIP
Telephone Switch over IP
- Built-in IP-PBX features integrated into architecture
- Up to 15000 calls per hour supported
- Intercom, loops and conference management
- Lines accessible through modular gateways
- Advanced IP-PBX functionalities

CAPACITY
- Supports 1 to 240 working positions
- Manages up to 480 analog transmitter / receiver
- Manages up to 700 IP ED-137 Transmitter / Receiver
- MCR board manages up to 4 transmitters / receivers
- MCR board manages up to 4 working positions
- Many rack size available to support 1 to 16 MCR boards
- Network made of up to 8 interconnected racks

INTERFACES

Radio
- E1 2Mbit/s Interface for recording
- Interfaces vs. R2/CIV DREX (Socrates) / MIL
- Radio interface and multi-frequency analog mono
- Radio interface via ED 137 IP access
- Radio interface access via E1
- Radio interface via ISDN BRI

Telephone
- Network Access Interface FXO analog DTMF
- Interface FXS access single station
- ISDN Primary Access
- ISDN Basic Access
- VoIP SIP interface position
- BL interface
- MFX/R2 Interface
- ATS-QSIG Interface
- SIP ED-137

→ RELIABILITY **SECURITY** **USER** EXPERIENCE **FLEXIBILITY** ADVANCED **FUNCTIONALITIES**

→ **Strengthened by expertise in VoIP for nearly 10 years** and its active involvement in development of new standard ED 137, CS has designed the product CSoIP (Communication & Security over IP), its new full IP Voice Communication System (VCS) that efficiently caters for current and future air traffic controllers needs.

→ **CSoIP is an innovative product** fully compliant with the ED-137 EUROCAE standard that normalizes communication streams over IP technology. It provides a highly reliable radio-telephone-intercom integrated solution running over secure IP architecture.

→ **CSoIP fits seamlessly your existing equipment.** It ensures high capabilities and safe communication flow to exploit the potential of your control center.

THE GROUP CS

CS is a Major systems supplier and integrator, for decades CS has been a Leader in information systems. CS's expertise in mission critical applications and systems makes it the best partner in sectors with strong growth potential, such as defense, space and security, aeronautics, energy and transportation. With € 200 million in revenues and 2,000 employees worldwide, CS is an established provider, acknowledged by major customers for its expertise and commitment of service to customers.

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