



GSM vs. WLAN telephony

A smart choice for long-term care

Communication technology in care facilities is a key factor for safety and efficiency in everyday life. The focus is often on two technologies: GSM and WLAN telephony. Both have their advantages, but the requirements of long-term care are increasingly showing that GSM offers decisive advantages in many areas. Read why GSM is a strong option and what role WLAN can still play.



GSM telephony: focus on reliability and mobility

The strength of GSM lies in its reliability and flexibility. Unlike WLAN, GSM is not limited to the range of a local network. Care professionals benefit from continuous accessibility - whether in the building, on the outside grounds or even from home when on call. This mobility makes GSM an ideal solution for the dynamic day-to-day work in care facilities.

The low maintenance requirements also speak in favor of GSM. While WLAN networks require regular updates and maintenance of the access points, GSM requires almost no additional effort. An occasional replacement of repeaters is sufficient to ensure long-term operation. This aspect not only reduces operating costs, but also minimizes downtime - a decisive advantage in an area where every minute counts.

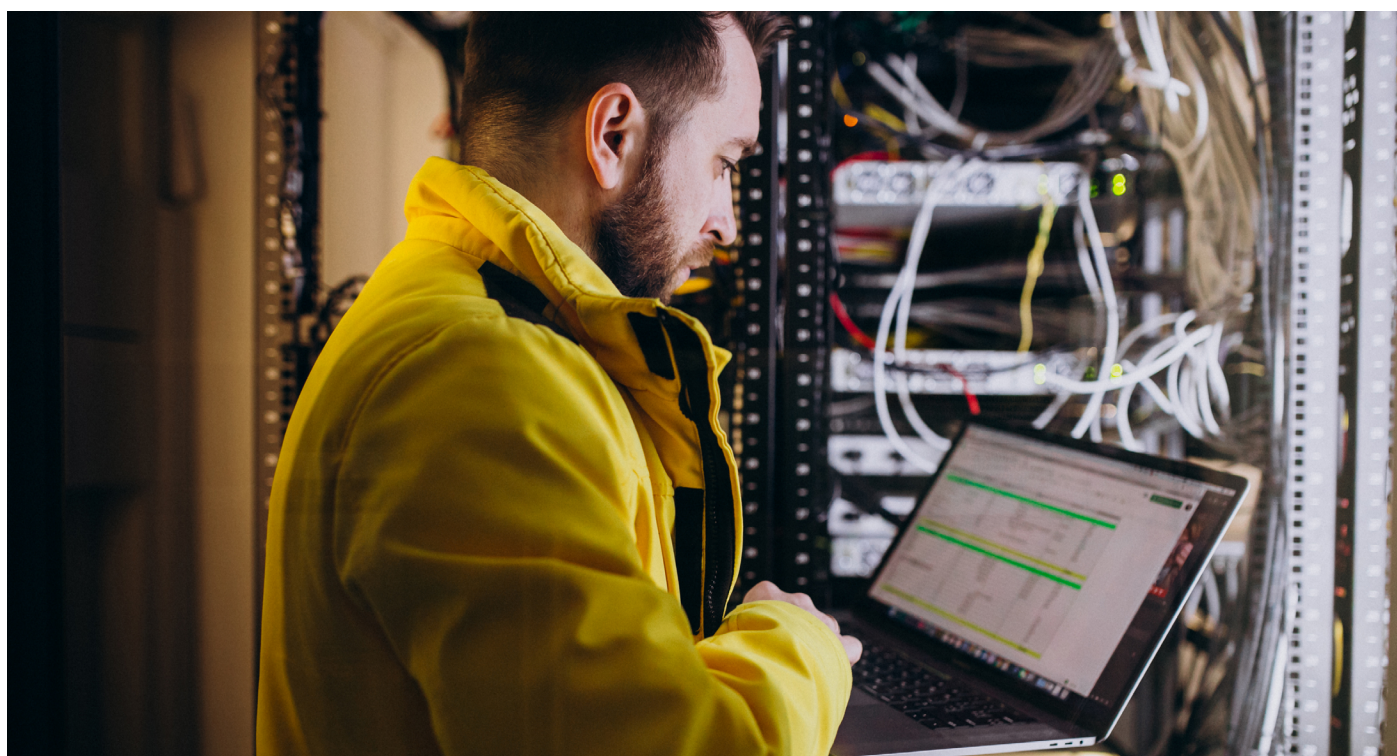
A look into the future also shows that GSM is predestined as a technological basis for innovation. Machines and devices with M2M SIM cards are already communicating with the cloud via the mobile network, and this trend will continue to grow. New care homes are increasingly dispensing with complex WLAN infrastructures and relying on GSM to ensure long-term flexibility.

WLAN telephony: a proven solution with limits

WLAN telephony has its strengths, especially in environments with an existing infrastructure. Many care facilities use WLAN not only for communication, but also for other digital applications such as care documentation or the operation of tablets and smartphones. One major advantage is that there are no additional subscription costs, which makes the system cost-effective.

Technological advances, such as the introduction of mesh networks, have also significantly improved the range and stability of Wi-Fi. In modern facilities, a well-planned Wi-Fi system can provide reliable coverage. Nevertheless, it remains limited in terms of mobility: as soon as the network is left, the connection is lost.

The implementation of VoWLAN (Voice over WLAN) using smartphones poses a considerable challenge in the care sector. The technical requirements are particularly complex: devices must be continuously coordinated with software versions, access points, switches and QoS (Quality of Service) settings and regularly optimized. This organizational and technical effort should not be underestimated.



Although voice-over-WLAN technology is familiar from the private sphere - for example through applications such as WhatsApp - there are crucial differences that need to be taken into account, especially in the care sector. Nursing staff are constantly on the move in their day-to-day work and frequently move between different areas of the facility - from patient rooms to corridors and outdoor areas.

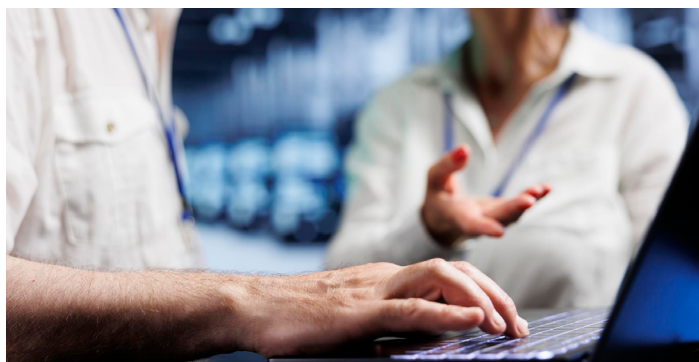
This requires the highest standards of voice quality and connection stability during movement. A consistently stable connection and a seamless transition between the access points are essential. These requirements not only make the implementation of VoWLAN technically demanding, but also increase the susceptibility to problems such as disconnections, delays or loss of quality in voice transmission.

In addition, the working environment in care facilities poses particular challenges: thick walls, potential sources of interference from medical devices and a high number of users in the WLAN network further exacerbate the problem.

In practice, this often leads to low user satisfaction. Care professionals depend on reliable communication - especially in emergency situations. An unstable system can not only lead to frustration, but also potentially cause safety-critical problems.

In comparison, classic GSM technology (Global System for Mobile Communications) with mobile devices offers significantly more robust communication options. These devices were specially developed for mobile voice communication and guarantee a reliable connection and quality even when in motion. GSM offers comprehensive network coverage and is therefore also preferred by emergency services. The enormous technical effort required to set up a stable VoWLAN system is completely eliminated.

WLAN also requires intensive maintenance. Access points need to be checked regularly and replaced after around five to six years. These ongoing investments put the original cost efficiency into perspective and increase the workload for IT administration.



Why GSM is the future of long-term care

Although WLAN can be useful in specific scenarios, GSM is proving to be the more robust and future-proof technology. Its ability to work independently of a local infrastructure makes it the preferred choice for care workers who need to move flexibly and freely. Especially in emergencies or large-scale outages, GSM offers a level of reliability that WLAN cannot match.

Hybrid systems that combine GSM and WLAN may offer advantages in some facilities, but the increasing availability and flexibility of GSM reduces the need for such mixed solutions. For facilities that want to rely on a scalable and future-proof infrastructure in the long term, GSM is the clear recommendation.

Security and trust in the technology

One point that is often discussed is the security of the systems. WLAN offers a high level of encryption with standards such as WPA3, while GSM was susceptible to attacks by IMSI catchers in the past. However, modern GSM systems rely on improved security protocols and minimize this risk considerably. Ultimately, the choice of system also depends on the specific security requirements of a facility.

Conclusion: GSM - a strong basis for care

The requirements of long-term care demand reliable, simple and future-proof communication solutions. GSM meets these criteria in almost every respect. With minimal maintenance requirements, comprehensive mobility and a clear focus on future technological developments, it represents an optimal solution.

WLAN remains a useful addition in inpatient areas, but the main burden of communication should lie on a system that offers care staff maximum freedom and security.