

Service boxes

Background

Fast access to the World Wide Web has become an important deciding factor in choosing a retirement home. The Villa Sibilla senior residence wanted to offer its residents high-performance Internet access not only in the café, but also in their apartments.

Challenge

Fast Internet access that is available everywhere and, above all, is also less expensive than the previous provider contracts of the individual guests. Moreover, to exclude any potential adverse effects from electrosmog, the new solution was not to involve wireless transmission.

Solution

Data transfer via the existing antenna cables using devolo dLAN® and the careful planning of SCHÜLLER COMMUNICATION GbR avoid expensive and disruptive construction measures. The residents are not exposed to any harmful electrosmog, since all of the digital information is transferred via shielded cables.

Benefits

- The Villa Sibilla retirement home further raises the already high level of its 144 apartments using devolo dLAN®.
- The apartments and function rooms have fast access to the Internet.
- The dLAN® adapters are configured so that no user is able to access other users' data via the internal network.
- The performance of the adapters can be individually adjusted as needed.
- The residence management incurs neither high costs nor limitations to its operating schedule.
- Cabled transmission protects the residents from electrosmog.

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Seniors flock to World Wide Web

The Villa Sibilla retirement home is bringing devolo dLAN® Highspeed Internet into 144 apartments – but electrosmog has to stay outside

The 50-plus generation has long ago conquered the Internet: The number of "silver surfers" has really grown by leaps and bounds since the 1990s. In Germany, some 2.9 million over-60-year-olds regularly click through the World Wide Web, chatting, shopping and blogging. The new generation of seniors is not satisfied with backgammon in the common room and going for walks in the garden – it wants to discover more of the world. At least virtually in the World Wide Web. As a result, more and more senior housing facilities are posed with the challenge of bringing high-speed Internet access into every room or apartment. Some do it the complicated way using network cables, others – like the Villa Sibilla in Bad Neuenahr, Germany – the clever way: They use devolo dLAN® to access data in the 144 apartments via the existing antenna cables – without great installation effort, high costs or disturbing the residents.



After having lived for many years in an apartment or one's own house, moving out and into an assisted living establishment is usually not a decision that anyone makes on short notice. After all, such a move is the beginning of a new phase in life. Many elderly people rely on professional assistance from well-trained nursing staff and therefore make use of the services of senior housing facilities such as Villa Sibilla. Villa Sibilla is a retirement home located in the immediate vicinity of Bad Neuenahr's spa gardens and, with 144 high-class apartments, it is a new home for its nearly 170 residents. The over 10,000 square metre premises offer not only sufficient space for the constantly changing daily activities, but also has its own chapel, a restaurant, special rooms for celebrations, conferences and speeches, the foyer with shops and the outer terrace with catering.



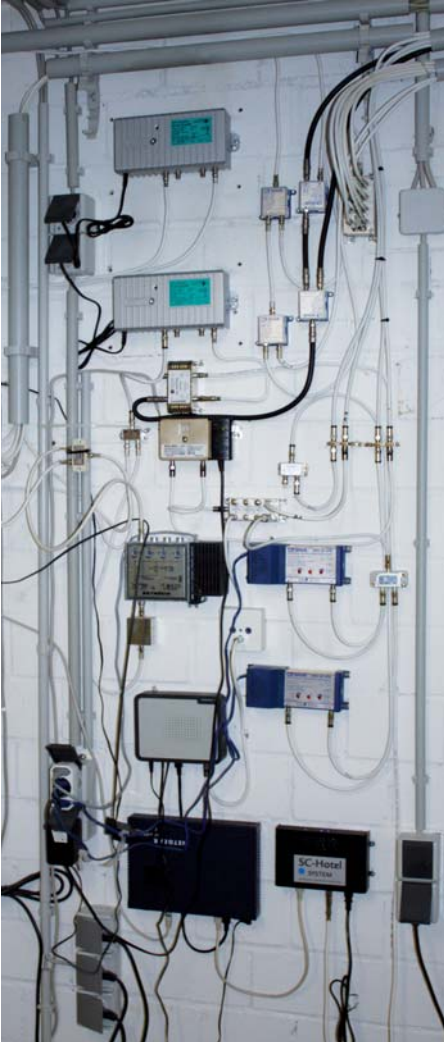
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relates Christoph Leßnig, residence manager of Villa Sibilla

But in order to offer residents – particularly the silver surfers among them – the optimum in multimedia as well, in October of 2008 the residence management finally sought a future-proof concept for equipping all apartments with a broadband Internet connection. The reason: "Standard access to the Internet has by now become an important deciding factor. And our little Internet café in the Villa foyer was not enough for many tenants. Understandably, they would prefer to surf undisturbed within their own four walls," explains Christoph Leßnig, residence manager of the Villa Sibilla. But how do you technically implement high-performance, inexpensive Internet access if conventional networking of more than 500 rooms with classic network cables is not only far too expensive, but also requires too much time, noise and renovation? "Wireless LAN was out of the question because many of our resi-

dents are very sensitive to any adversity that might be caused by electrosmog," the residence manager relates.

Finally, an industry colleague gave Leßnig the decisive technology tip: "The knowledge that data can be transferred via the existing power, phone or antenna cables was worth its weight in gold." devolo forwarded the request from Bad Neuenahr directly to selected service providers in the area; finally Wilfried Schüller, owner of SCHÜLLER COMMUNICATION GbR, got the contract in December of 2008. The powerline experts from Bergheim, Germany, developed an outstanding solution using devolo adapters: At the building's main connection, a devolo dLAN® 200 AVpro host – switched as master – was connected to the Internet hardware, which also saves the connection data as is legally prescribed. The data travel from that point into all 144



apartments via the existing antenna cables of the Villa Sibilla. To establish a network connection, the tenant needs only an adapter, a dLAN® 200 AVpro 2 switched as slave. Thanks to careful planning by the system provider, SCHÜLLER COMMUNICATION GbR, the entire dLAN® was ready for use within a few days. Schüller summarises the course of the project as follows: "We held detailed conversations with the antenna manufacturer in advance, studied the cable diagrams and made measurements. With all of this information, we were then able to carry out the planning in our office and finally to perform the targeted installation. At the end, the signal amplifiers were readjusted together with the project's antenna manufacturer – Audio-Vision Christian Fuhs of Bad Neuenahr-Ahrweiler." "And this minimal structural work in particular was an essential advantage of the dLAN® technology for us," Leßnig describes.

The residents of the Villa Sibilla are now surfing the World Wide Web at speeds of up to six megabits per second – always right in the room of their apartment in which they have connected their dLAN® 200 AVpro 2 to the antenna socket. "The whole system is designed so that even up to 253 devolo

adapters could be connected simultaneously; however, we have configured the devices so that no one can gain access to another user's data via the internal network," explains the owner of SCHÜLLER COMMUNICATION GbR. Each user is limited to a bandwidth of six megabits per second, according to the agreement with the management of the Villa Sibilla, so that no single "power user" can use up all of the 26 megabits per second of the Internet connection's current bandwidth. If necessary, the system can be expanded for additional Internet access points, with automatic load distribution.

The management of the Villa Sibilla retirement home assumes that in the next two years, more than 70 guests will use the new service. According to Leßnig, the low costs of the entire project will have paid for themselves in only 18 to 24 months: "We are very optimistic that the technology will be well received; at least that is what we are hearing from the users so far."

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In detail: This is how devolo dLAN® works in the Villa Sibilla retirement home

A devolo dLAN® 200 AVpro host was installed as the master device on the central Internet connection in the basement of the main building of the Villa Sibilla and connected to the existing Internet hardware. From that point, the data are transferred via the existing antenna cables to the devolo dLAN® 200 AVpro 2 units switched in slave mode in the 144 apartments (approx. 500 rooms). As a result of

the powerline technology in use, the signal can be transported up to 1,500 m via the existing antenna cables. To do so, signal amplifiers and active components of the antenna system are "bridged" via a data link. Up to 253 slave adapters can be connected to the Internet within the existing system – if necessary, even with limited or different bandwidth.



Table

Number of networked apartments	more than 500 rooms are already prepared for networking
Cost savings through devolo dLAN® in comparison with other solutions	up to 90 percent
Infrastructure used instead	existing antenna cabling
dLAN® adapters used	currently 5 dLAN® 200 AVpro 2 devices as slaves 1 dLAN® 200 AVpro host as master
Intended purpose	Fast Internet access (26 megabits per second) with up to six megabits per second in 144 apartments and more than 500 rooms overall. If necessary, the system can be expanded for additional Internet access points, also with automatic load distribution.
Another special feature	Thanks to an additional modification, the dLAN® adapter's LED displays provide information only for the user's own data transfer – not for the entire line. The adapter settings cannot be modified by the users.

Schematic design of the networking solution

