D-Link®
Building Networks for People

case study

Shopping Park

D-link equipment as part of the modern infrastructure for Aupark Shopping Centre Bratislava

Aims of the project:

- To replace the existing inadequate Wi-Fi system and provide a centralised network for the entire site with a secure wireless connection
- A fast, trouble-free installation of the chosen system using D-Link network products
- Continuous, uninterrupted operation throughout the shopping centre
- Guaranteed easy management of the entire network

Main benefits:

- High-quality support for the entire network
- Easy installation, simple management
- High performance and wide coverage

Construction of the modern Aupark Shopping Centre Bratislava began in 2000. Construction continued over the next seven years, and from 2007 onwards, visitors had access to a 58 000 m2 site built to the latest standards and full of shops, restaurants, cafés and other leisure facilities including a cinema.

This shopping and leisure complex also provides a good-quality, fast internet connection for all visitors. In addition to a wide range of foods and designer clothing, shoppers welcome the chance to catch up with their work email or impress their friends on social networks with funny photos taken during their afternoon off.

The shopping centre was equipped with a wireless network from the start, but over time this proved to be insufficiently robust. This meant that the network had to be thoroughly updated, without interrupting the everyday operation of the complex as a whole.

MEDIA.COM Slovakia s.r.o. were chosen to implement this new project. This company had successfully set up the free-access Wi-Fi connection in the POLUS City Centre shopping mall in Bratislava - all the more reason for them to take on this project too.

Specifications of the implementation

The main requirement for the chosen system was the creation of a reliable Wi-Fi connection which would be available to visitors free of charge and without restriction, regardless of the terminal equipment used.

Given that a Wi-Fi network had been in operation in the centre in the past, it was necessary, in the first phase, to replace the existing system with D-Link products, to provide wider coverage using stronger transmitters. The Wi-Fi bridge connections were also replaced with cable connections for all the transmitters, to ensure better coverage and a more reliable operation. In the second phase, coverage was extended to the existing part of the shopping centre where coverage had not been ideal, so that all areas of the complex had the strongest possible good-quality signal.

"When choosing a specific system, the main consideration for us was our very good experience of D-Link enterprise solutions, which are effective and reliable as well as reasonably priced."

— Andrej Ardan, director of MEDIA.COM Slovakia

Following a technical analysis of the current situation, a centralised wireless system became the heart of the whole installation in the Bratislava shopping complex. The main features of this implementation include DWS-3024L Gigabit L2+ Unified Managed Switch with twenty-four ports, plus a series of DWL-8600AP Unified Wireless N Simultaneous Dual-Band PoE Access Points.

The DWS-3024L Wireless Switch allows integrated management and control for the Access Points, with the support of 802.11n technology.
In addition to centralised management of the Wi-Fi network, this equipment features PoE ports which are used for connecting individual Access Points, telephones and other devices within the network through a standard Ethernet cable network.

Using this equipment, a highly efficient, easy-to-operate, scalable and unified wireless network was created. This is borne out by the fact that there is scope for progressively enlarging the network, thanks to the options for installing additional wireless connections in any location. This means that the installed infrastructure can be progressively improved according to the specific needs of users.

The individual DWL-8600AP Access Points implemented in the shopping centre, using the fastest 802.11n Wi-Fi, ensure wireless signal diffusion. These access points can function independently or can be incorporated into a broad infrastructure with a single controlling element, as in the case of the Bratislava shopping centre.

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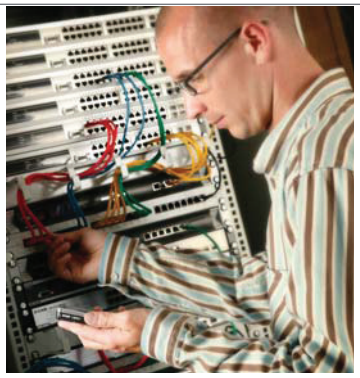

This equipment uses both frequency bands (2.4 and 5 GHz) and all four aerials to ensure optimum performance and total coverage. The products used were selected with a view to the future, when 5 GHz devices will become more widespread.

MEDIA.COM Slovakia put this system into operation just over a month ago. "Between the individual phases, we had to test the implemented system and decide on the best choice of locations for transmitters, which meant that the new system was fully functional when it came into operation," explains Andrej Ardan.

Advantages of the chosen design

In the Aupark Bratislava shopping centre, the design based on D-Link products allows centralised, secure operation of the Wi-Fi network, which includes such functions as automatic setting of transmission frequencies for the Access Points, multi-SSID, segmentation of the Wi-Fi network according to need (guest wireless access, internal Wi-Fi network), Access Point load balancing and necessary features to support VoIP such as Roaming, Fast Roaming and InterSwitch roaming.

Thanks to the D-Link devices, the network manager can depend on advanced security. With the DWS-3024L switch, every client wishing to use the network has to go through the authentication process. The design using the gigabit switch is protected by a number of security standards, and these of course fall within the scope of Radius, TACACS, SSH, SSL, 802.1x and ACL network security and other protocols. The centralised network element makes overall management much easier.

If a DWL-8600AP access point fails, its position can be located without problems and the faulty product replaced, so that there is no disruption to standard operation of the centralised Wi-Fi network. The DWS-3024L switch straightforwardly ensures smart behaviour of the entire installed wireless infrastructure.

The implemented system provides a flexible Wi-Fi network throughout the centre. "Thanks to their functions, the selected products provide a system that can be used every day by hundreds of visitors throughout the shopping complex. Our design provides a self-contained system which is easy to manage and highly secure, with scope for expanding the network in future," says Aleš Pícl, manager of D-Link for the Czech Republic and Slovakia.

Assessment of the installed system and prospects for the future.

The system provides high security, with enough internet capacity to ensure unrestricted internet access for customers in the shopping centre, who can use the Wi-Fi network for email and for routine internet surfing.

The main advantages of the installed system are its functionality, reliability, security and robustness. It forms part of the structured systems in the areas of the shopping centre, and in future it will be easy to extend it by adding new equipment.
The Aupark management can rest assured that their customers will enjoy trouble-free use of a guaranteed internet connection throughout the the shopping centre.

Products used in this project

 DWL-3024L	The DWS-3024L Wireless Switch allows integrated management and control for Access Points, supported by new 802.11n technology.
 DWL-8600AP	DWL-8600AP Access Point with the fastest Wi-Fi, complying with the 802.11n standard.

For more information: www.dlink.com

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