

INTERNET FOR MODERN EDUCATION



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He has graduated from the Faculty of Electrical Engineering and Informatics at STU with a focus on telecommunications. He has been working in the telco sector for 16 years and took part in the implementation of mobile networks of the 4th generation for several MNOs including Slovak Telekom, Dutch KPN, as well as 4ka in Slovakia. He has been working within SWAN for seven years, where the largest LTE network in the 3.7 GHz band in Slovakia grew under his supervision. He has been in charge of the EDUNET project since its very beginning in 2015, and since 2020 he is 100% dedicated to the project as its director.

Slovak telco company SWAN provides schools with the innovative internet system EDUNET, which is secure, safe and many times faster than the previously used Infovek 2. We have talked with Jozef Lasz, Project Director at SWAN on how EDUNET helps schools in Slovakia to meet the European demands for education in the 21st century.

How would you describe EDUNET?

EDUNET represents the most modern and robust connectivity to the internet ever provided to schools in Slovakia. The EDUNET project provides Internet connectivity, telecommunications and data services, central management services, direct access to digital educational content and filtering of Internet content according to user rights to more than 2700 schools and other educational facilities in Slovakia.

What are the advantages of EDUNET?

There are three aspects in which EDUNET is superior to its predecessor. The first and the most obvious one is in the speeds of internet connection which are multiple times higher than before. More than 600 schools we connect today benefit from internet connection speeds exceeding 200 Mbit/s and half of these schools are connected with the fastest Gigabit internet available. The second difference is that all schools are equipped with quality wireless network using professional WiFi technology. The third improvement is the security of the network and internet safety managed by the central

point, where our solution blocks inappropriate web or application content for safer online environment.



SWAN provides schools with all necessary IT support so that schools do not have to deal with IT.

What is the main role of the central point management?

There is a complex technology behind the solution, but to keep it simple we can say that it consists of several security units. These are provided in full redundancy so even in the case one system goes down the backup system will take charge instead. This central point also manages all WiFi connections at schools and its security, but also security of the backbone network against possible cyber threats.

What is the advantage of this central network management point?

It's the central management point that makes our solution stand out. As we were assessing internet connectivity at different schools, we have found that many schools used residential internet connection that lacked the necessary internet security or even management in case of internet outage.

Modern education goes hand in hand with the use of up-to-date learning methods that often employ modern technologies. Devices such as interactive dashboards, smart tablets and even online education in schools all depend on high quality internet connection.

On the contrary, we provide 24/7 network monitoring and in case of any connectivity issues we react immediately. We also provide schools with professional IT support which is crucial as many schools do not have dedicated IT professionals. SWAN provides schools with all necessary IT support so that schools do not have to deal with IT. SWAN even helps schools to integrate their existing IT infrastructure, such as local servers, computers, network printers and smart dashboards in one connected environment.

How many Slovak schools are connected to EDUNET?

Up to date SWAN has 2783 fully connected schools in all regions of Slovakia, about 400 are high schools and the rest are elementary schools, kindergartens and other education facilities. These schools cover over 600 000 users of which about half a million are students and the rest are teachers and other school personnel. We are still connecting new schools based on their interest.

What internet safety features does EDUNET provide?

We designed EDUNET with safety being one of the top priorities. EDUNET can effectively filter inappropriate content from the internet for different age groups or user types with daily updates in cooperation with The Ministry of Education. We do not use just web filtering but also application filtering, e.g., limit the use of social networks for underaged students.

What technology is used to connect schools to the internet?

We always use the best technology available to connect schools to the EDUNET network. Schools are connected to EDUNET in general through fiber-optic technology, licensed microwave technology or LTE advanced technology and some schools are connected with modern xDSL landline technology. To provide best connectivity available we also cooperate with more than 80 local internet providers. Besides connectivity we provide schools with additional hardware to supply all the services. We have connected more than 15 thousand devices such as professional Gigabit WiFi hot spots and other active devices. Our centralized solution uses virtualization to provide the best performance and is capable to handle all schools in Slovakia which count up to 7 000.

How did the pandemic affect internet connection in schools, have you noticed an increased demand for connectivity from schools?

Sure, online education that has become standard in the past two years increased demand for internet connectivity as well. The new situation has been a challenge as EDUNET was designed to provide connectivity to schools rather than out of them. Covid has reversed this perspective completely. We have done our best to boost upload speeds for hundreds of schools so that teachers were able to stream live to students connecting to classes from their homes. We are proud that our solutions help schools in Slovakia to fully utilize internet in the educational process and that more and more schools want to be connected to EDUNET.