

# Customer Service at Cable TV Provider SATRO

■ Customers can find SATRO's Customer Center in this building in central Bratislava.



- *Special offer for using multiple TVs*
- *Utilizes Hybrid Fiber Networks*
- *Has 10-15% of the Slovakian market*
- *50% of new customers opt for Multiroom with SmartWi*





# "Half of our new customers choose the Multiroom solution"

■ Martin Kopca is cable operator SATRO's Executive Director. Thanks to SmartWi's card sharing system, his company can offer Multiroom solutions to its customers.



Back in the old days when TV signals were still transmitted in analog mode, cable TV customers could simply use splitters to connect multiple TVs. For example, in addition to the main TV in the living room, they could add another TV in the bedroom or a third in the kid's room.

With the advent of digital technology, this simple solution was no longer possible. If a cable customer wants to add a second TV, the logic with almost every cable TV provider was that they should take out a second cable TV subscription. Some cable operators offer a discount for adding additional TVs. But there's a problem with this: what if the customer doesn't use this second discounted subscription himself and instead passes it on to someone else so that they can split the savings between them?

For this reason, many cable TV providers don't even offer a discounted subscription rate for a second or third connection. So when one cable TV provider states that half of their new customers opt for a Multiroom solution – for reception on multiple TVs – then this statement was so puzzling and unusual that TELE-satellite decided to find out the reason for this. Why at one cable operator would half of the customers want



■ Marek Michalik is responsible for SATRO's marketing. Here he's showing us SATRO's new logo.

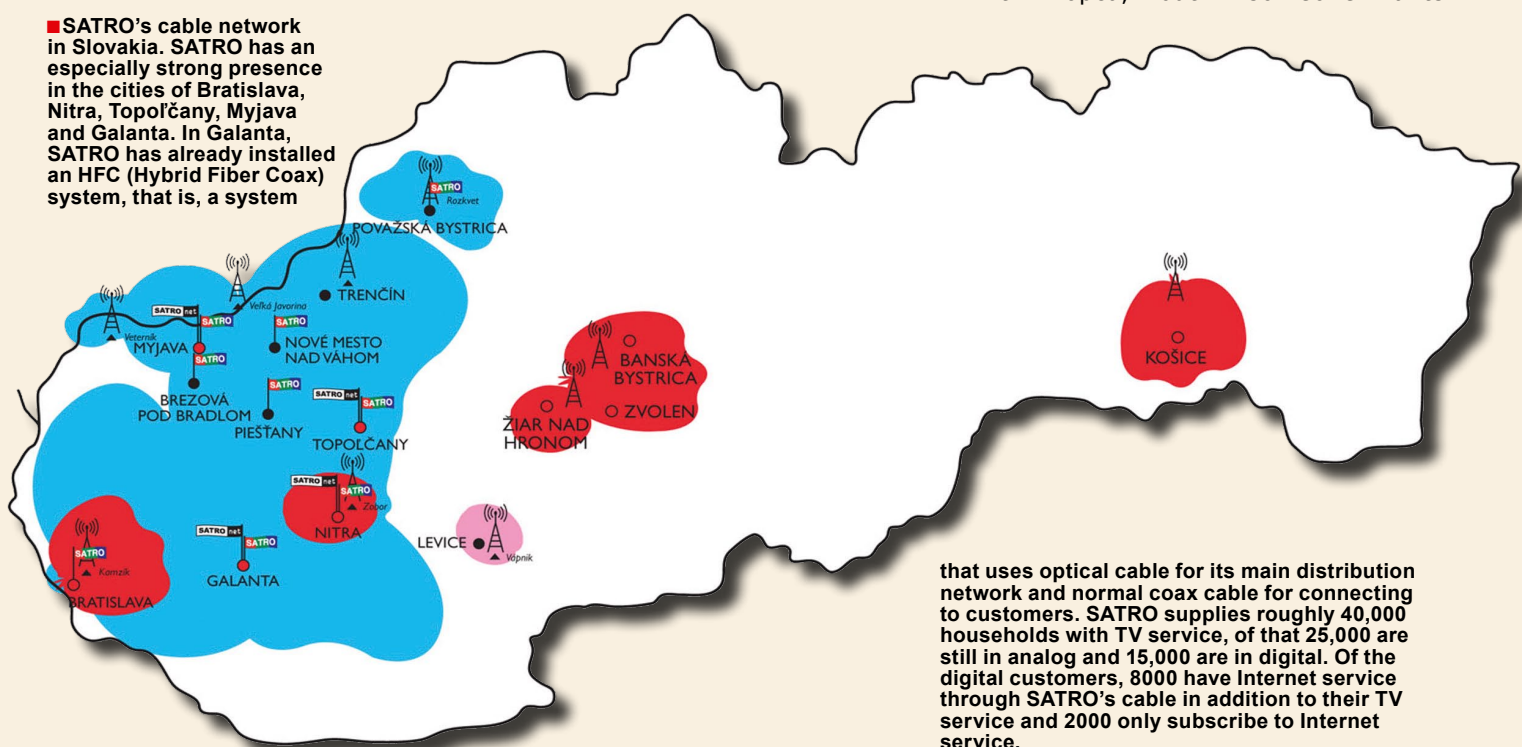


something that isn't even available with most of the other cable operators? What is this one cable TV provider doing differently than all the other cable operators in the world?

In an industrial zone in Bratislava right next to Highway D2 towards

Brno and across from the Galéria Shopping Center can be found cable TV operator SATRO's administration building. Martin Kopca, SATRO's Executive Director, works here and he's a very enthusiastic engineer. The statement that half of SATRO's new customers choose the Multiroom solution comes from him; it allows customers to watch SATRO's cable TV programming individually on up to four TVs. "Of course, you could connect up to eight TVs with our Multiroom system", reveals Martin Kopca, "but if someone wants

■ SATRO's cable network in Slovakia. SATRO has an especially strong presence in the cities of Bratislava, Nitra, Topoľčany, Myjava and Galanta. In Galanta, SATRO has already installed an HFC (Hybrid Fiber Coax) system, that is, a system



that uses optical cable for its main distribution network and normal coax cable for connecting to customers. SATRO supplies roughly 40,000 households with TV service, of that 25,000 are still in analog and 15,000 are in digital. Of the digital customers, 8000 have Internet service through SATRO's cable in addition to their TV service and 2000 only subscribe to Internet service.

to connect more than four TVs, red flags go up by us." The reason is not so much that SATRO fears a customer is doing something they shouldn't be doing (that is to say, letting next door neighbors connect to his cable TV service), but rather if there are so many rooms in an apartment or house, the SATRO Multiroom solution might not be able to do its job. "Our technicians will check it out on location and if the situation is understandable, we simply install more than one Multiroom solution."

Now we want to know what this Multiroom solution is all about. "It's very simple: we use SmartWi's card sharing system; it's the ideal solution for us!" says Martin Kopca and then explains, "The SmartWi system is based on the transmission of card information in the 860 MHz range. This frequency range can be freely used as long as the power output doesn't exceed a certain limit."

The effect is that the output signal is strong enough to reach multiple receivers in a normal apartment but too weak to be used by anyone in a neighboring apartment. "The SmartWi system guarantees that not one of our cable customers can pass our signal along to a friend or relative or simply resell it", says Martin Kopca explaining that they chose this system because only legitimate customers can actually use the card signal.

How did SATRO even figure out that SmartWi was the 100% solution to their problem? Let's find out more about SATRO. "SATRO was founded by Frantisek Kaduch who still today holds an 85% share in the company. The remaining 15% share is owned by his son and successor", explains Marek Michalik, responsible for SATRO's marketing.

When Slovakia was still a communist country, Frantisek Kaduch was working for state-run television in the transmission technology section. He took care of the broadcaster network and back then had the privilege

of exporting his expertise. "For many years our founder was busy setting up TV transmission networks in African countries", remembers Marek Michalik regarding the company's history.

In 1986, still in those communist days, Slovakian state television began making plans to distribute the increasing number of available TV channels to apartment houses via cable TV systems. Frantisek Kaduch was occupied with this subject and, thanks to his foreign experience, recognized the enormous potential that existed here for the future. His chance came in 1989 when communism died in Slovakia: he became self-employed and installed the first cable networks (SMATV – Small Mas-

ter Antenna TV) in various apartment buildings. The newly founded company expanded very quickly; in 1992 it became a real firm that Frantisek Kaduch named SATRO (an abbreviation of Satelitny Rozvod or Satellite Network). It all became very serious in this same year: the city of Bratislava gave out exclusive licenses for specific sections of the city; SATRO acquired the license for the Devinska Nova Ves district. SATRO was given the rights to install cable TV systems in the homes in this district. After three years, all 6000 homes in this district had been wired by SATRO.

There's an even more important reason why cable TV was so well received: the people finally wanted

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## SmartWi II

### A Clever Solution for PayTV Reception in Multiple Rooms

• *PayTV providers typically give you only one SmartCard per subscription yet in most households this is simply not enough. In addition to the typical receiver in the living room, these days you could also find one in the bedroom, the kid's room and even in the kitchen.*




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Available online starting from 1 April 2011

■ In TELE-satellite's 04-05/2011 issue can be found our test report on SmartWi's card sharing system. The report can be read online here:  
[www.TELE-satellite.com/](http://www.TELE-satellite.com/)



TELE-satellite-1105/eng/smartwi.pdf



■ This is Bratislava's TV tower that was erected in 1975. At the foot of the tower is a restaurant. The tower is located at the edge of Bratislava on the Kamzik hill that is 435.5 meters above sea level. The tower itself is 200 meters high with all the transmitter electronics located at the 170-meter level. Other providers besides SATRO use this tower to transmit their services which include local terrestrial TV programming and mobile telephone services.

to embrace their freedom and watch all those new satellite TV channels. "Above all it was the private TV channels from Germany that were back then a strong argument for the people to want cable TV", explains Martin Kopca from the past. But this reason has largely fallen to the wayside thanks to the increasingly large number of local TV channels that have appeared in their own national language.

Back then SATRO was obviously not the only company that installed and operated cable



TV. SATRO reached a market share of 10-15% in the year 2000 and it's still about the same today."

The market has stabilized but it has certainly not come to a halt. "We're always upgrading our system", explains Martin Kopca who as an avid engineer plays an important role in the further development of SATRO's implemented technologies. "In the beginning, everything, of course, was analog", he says, "Back then we were able to carry 30 to 40 TV channels." Since the laying of cable only made sense economically within the city, a new technology came into use in 1998: MMDS. SATRO transmitted signals that could be received by customers outside of the city with a terrestrial dish antenna. "We were only licensed to use the MMDS frequencies up until 2011. The system will be turned off because the fre-

quencies are reserved country-wide for other services", he explains, "LTE will be taking over these frequencies."

So, SATRO inaugurated the MVDS system in 2009. This system operates in the 11.7 to 12.3 GHz range – yes, this is precisely within the Ku-band. "The advantage is the larger bandwidth. We divided this range into two bands; this resulted in 38 streaming 8 MHz channels", details Martin Kopca, "for each stream we can provide 10-12 SD channels for our customers." He gives us a surprising explanation for the use of QAM64: "This modulation doesn't offer error correction but transmitter and receiver are in line of sight of each other anyway and not relatively far apart either. The big advantage with QAM64 is that with it we can completely cover the transponder stream of a satellite. One DVB-S satellite channel at 38 Mbit/s corresponds to exactly one QAM64 channel."

Looking at it from a strategic point

of view, the implementation of MVDS has another significant advantage: "We use it to offer high-speed Internet!" For this service the cable customer gets a reception system with a transceiver – a two-way system. "We offer real symmetry here, in other words, upload and download speeds are identical with us." For the Internet SATRO sees long-term interest for those customers outside of the city, beyond the reach of the hard-wired cable network. "Cable distribution within the city is optimal", explains Martin Kopca, "but in the areas surrounding the city where installing cable is not economically practical, MVDS technology is the perfect solution."

After seeing what the future holds, it's time to get back to the Multiroom solution. "When we switched over to digital technology, many of our older customers were hesitant; we couldn't offer them a solution on how to connect two or more TVs", says Martin Kopca. He took a look at the various solutions that were available. "One manufacturer, for example, offered

■ When the weather is nice Rudolf Pobis enjoys the exclusive view you get from Bratislava's tower. The Danube is in the background.





■ Our visit to the tower came at just the right time: a new directional transmitter antenna was being installed.







■ These are modulators for SATRO's MVDS system in the TV tower. Broadcast Technician Rudolf Pobis regularly keeps an eye on the settings.

He explains to us, "We transmit with three segment antennas at about 50W each. This provides reliable reception to a range of about 25 km in the direction of each segment antenna." This is enough to reliably cover the city of Bratislava.





■ A look down from the TV tower: the two uplink dishes for Slovakian DTH provider Skylink are seen in the forest clearing. They are a strong competitor to SATRO's TV programming packages.

a receiver with two tuners but on the one hand the box would get too hot during operation while on the other there were problems with remotely controlling the box or connecting to TVs in other rooms."

He squashed every idea until he stumbled on to the SmartWi card sharing system. "All of a sudden we had the solution to all of our problems!" says Martin Kopca who today is still thrilled since SmartWi has everything that the other solutions didn't have. It is manufacturer-independent for the boxes that are used ("We use chip-pairing", explains Martin Kopca) and guarantees at the same time that the reception cards

can only be used inside the home of the cable customer. Since the original card is not manipulated by SmartWi, as might be with other solutions, all of the concerns that hackers might be able to penetrate the system fade away. Martin Kopca can't figure out why other cable system operators haven't also implemented this system. "Demand is enormous because today's customers have more than one TV and they want to be able to watch all of their TV channels on every TV."

When SATRO switched over to digital technology, many of their existing customers were hesitant to make the change from analog to digital.

"Back then we didn't have a Multiroom solution and many customers were reluctant to switch over to digital. They insisted on sticking with an analog signal." Since SATRO began offering their Multiroom solution, that reluctance completely changed: "Every other customer opts for the Multiroom solution", says Martin Kopca with a smile on his face. SATRO makes it very easy for a customer to decide on the Multiroom solution. "Our basic package costs 39 Euros a month and to add a Multiroom system – a SmartWi box and the second programming package – it costs just 2 Euros more a month, 1 Euro for the SmartWi box and 1 Euro for the programming package."

Is there anything to criticize with the SmartWi system? Martin Kopca





moving the SmartWi box also didn't help", reveals Martin Kopca from experience, "But SmartWi found a remedy: the new generation of SmartWi now at the start scans five different frequencies and selects the one frequency that has no interference." This trick also eliminates those rare cases where there were still sources of interference. "We are very satisfied with SmartWi since its software is always being optimized and consistently improved", says Martin Kopca and then continues, "even in those cases where the SmartWi's output power is too low (and can't be increased), SmartWi has found a solution that they are working on. We will then be able to offer this sys-

tem to those customers with larger homes or multi-story homes."

As you have just seen, the SmartWi card sharing system, that TELE-satellite has already written about as a system for private end-users, can do much more: it provides cable TV operators with the perfect opportunity to satisfy a customer's need to connect more than one TV. Cable TV provider SATRO clearly recognized this option and has implemented this system to the satisfaction of many of its customers. The fact that half of their new customers opt for this system, is an indisputable argument in favor of the SmartWi system.

can only shake his head: "The system is perfect and 95% of the time there are no limitations with the installation." SmartWi reaches its limits when the customer's apartment or house is too large. "Its range is limited since we simply aren't allowed to transmit any stronger in the 860 MHz range." Then there are those cases where other transmitters in the home can create interference. "Quite often it's a DECT telephone or a customer's WiFi router that can create interference." Martin Kopca suggests that in these cases to try and move the SmartWi box to a different location. "In most cases, this solves the problem very simply."

The first generation of SmartWi was restricted to operating on one specific frequency. "In certain cases



■ This is an example of a transceiver unit for SATRO's Internet Service