

smartwi[®]

Introducing the new
SmartWi to the
Operator Market

The SATRO
experince
with SmartWi



New SmartWi ready for operators

When Pay-TV systems and encryption methods were developed more than a decade ago multiroom solutions were not high on the agenda, and this is probably the reason why it became a stepchild of the core technology designed to curb widespread abuse at the time.

SmartWi was introduced in 2005 to meet the specific demand for multiroom solutions and has since become increasingly effective and sophisticated in terms of function and versatility. It works impeccably with Viaccess 1&2, Irdeto 1&2, Seca Mediaguard 1&2, Cryptoworks, Conax, CAS 5-7 and B-CAS.

Until recently SmartWi has mainly been marketed for private consumers, but now also professional Pay-TV providers are added to the customer list. Mainly because they understand that a flexible and affordable multiroom solution creates much improved customer satisfaction and -loyalty. In an increasingly competitive market this will be a decisive factor even more than it has been until now.

Simultaneously the SmartWi has matured to a point where it is more than ready for the providers that may wish to substitute their present solution with a wireless solution. At SmartWi we are very pleased with the new design and improved technical features - please read the following pages. But most of all we look forward to work closer together with professionals to meet their particular demands.

"We are highly flexible in terms of adapting SmartWi - both technology and design. The standard model comes with a versatile firmware that a provider may not be in-



terested in. So, we provide a specific version for each provider," says Kurt Panduro Olesen, CEO at SmartWi International. Flexibility in design includes specific colour, logo, and OEM production.

Buy, lease, or..

Equally important is the effort to meet the commercial preferences of the providers.

"Some professional customers may want to buy a quantum of SmartWi and sell or lease them to their subscribers with their own logo. Others may prefer to lease from us and let us take care of service and updates. Either way, we are able to provide," says the SmartWi CEO.

One of the new features of SmartWi is the ability to insert and apply an optional 2nd program card. Just another option that the provider may or may not want to benefit from.

SmartWi wireless Multi Room Solution



New SmartWi ready For Operators

Please let us introduce the new SmartWi. The market leader in wireless multi-room solutions now comes with a range of improved technical features, and we are frankly very proud of the new design. Coming from Denmark it is almost like the fairy tale 'The Ugly Duckling' that turned into a beautiful swan.

The improved qualities make SmartWi the obvious choice of Multiroom Solution for Operators. It is very flexible and may be adopted to the specific preferences of an Operator in terms of technology, design or commercial setup. The final result is increased customer loyalty and a stronger future market presence for the Operator.

Smartwi – The original professional DVB Multiroom Solution since 2004.

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SmartWi wireless multiroom solution

By Martin Kopča

Managing Director, SATRO s.r.o.

Unstoppable transition process from analog services, where the customers usually have more than one TV set, onto digital service with its standard 'STB per TV approach' forces operator to accommodate a new approach in servicing digital-TV customers.

More TVs in a household require more digital receivers and therefore more smartcards. Too low regular monthly fee assigned to extra cards would lead to loss of revenue, due to abuse of the cards outside the household. Too high fee would de-motivate customers to digitalize, due to a too high price for their usual multiroom viewing.

Solving this multiroom problem becomes a crucial point for the success of the digitalization. It's not only because of its technical side - each TV set at home needs one new STB e.g. one-stop initial investment

By our knowledge, based on the usage of SmartWi system, this system provides as secure solution as CAS itself.

into new HW. But, especially in pay-tv business, it's because of the impact on the regular subscription fee.

Direct competition of the "classic analog cable TV" providers forces digital service operator to provide competitive solution



Martin Kopča,
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for multiTV households. This is the most common situation. In addition, some pay-TV DTH competitors are offering proprietary, since quite primitive, dual-room solution based on two SD Zappers put in one simple metal enclosure.

Charging philosophy for every single STB within the household multiplies customers' expenses for the digital TV service. It's in a strong contrary with analog systems, where the subscriber fee is charged just for one household unit, not for every TV e.g. every STB.

Even content providers do follow this logic in issuing license fees for providing their content per "household", not per 'screen'. In order to get on the same start line with analog cable TV providers, we had to search for multiroom solution as secure as CAS itself and as flexible as an analog TV used to be.

Operator must respect the content license fees policy. The goal is to unify fee policy with analog systems e.g. to pay all content providers a single fee per household. Solution must be absolutely secure and traceable. In our search for a secure and appropriate multiroom solution, we have found following main possibilities:

Extra smartcards: Artificial business solution. Operator can hardly control whet-

and the SATRO experience

her these cards are used within the correct household. It is common among many European operators' to issue these smartcards at much reduced cost. If these cards are used outside the household, both we and our content providers will get severe losses. It is well known that these cards are very often abused and they are, among experts, considered as the largest piracy problem on the international pay-TV scene today. Some of our content providers will

not even accept the extra smartcard solution without license fee to be paid.

Our extra smartcards solution was based on the lowest possible subscription fee still as high as is necessary to cover the cost of at least license content fees. This solution did not generate any income to run the business and, in addition, it still increased the overall cost of our service per home.

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Who is SATRO?

SATRO s.r.o., is a cable television and data services operator, founded in Slovakia in 1992 and actually is one of the most innovative companies in the country. SATRO was originally focused on providing television and radio signal for households. SATRO was the first Slovak operator to launch broadcasting terrestrial television and radio signal in digital form. By adding data services and voice services to its product portfolio, SATRO continuously develops from TV only onto dual and tripleplay operator.

Today, SATRO has appr. 35.000 analog TV subscribers, 15.000 digital TV subscribers and 10.000 Internet subscribers on the company's HFC, MMDS and MVDS networks.

The company's own 'SATRO digital' service was established already in 2004 and since 2006 is using Conax CAS7 as primary conditional access system (CAS). It supports card-pairing, initially memory and now chipset one. SATRO has around 90 channels, both in SD and HD, available in digital packages, including top brands like, Discovery, National Geographic, Eurosport, CNN, Viasat and HBO.



...smartwi and the SATRO...

Proprietary receivers: There are few manufacturers of digital receivers offering a multiroom solution. It's mostly based on two united standard receivers' units in one box. Solution like this is hardly acceptable for many operators. Number of manufacturers with this solution is very low and

We were very pleased by the customers' feedback after the introduction of multiroom solution to our official operators' portfolio.

significantly limits the freedom of choice. In addition, this solution has no flexibility for combining SD and HD STB-s as well as PVR and non-PVR boxes in one household. Even more, operator is not able to use already distributed boxes to customers. This is definitely NOT versatile and future-proofed solution.

More receivers and one smart card: This philosophy follows the best the logic of licence content policy – fee per home. Technically, it is only possible via closed system sharing one smart card by more receivers.

Wired systems: basically, wired systems can be based on some proprietary 'home server' with smart card and attached proprietary multiroom clients communicating with server. Clients may have own RF input or they can use RF inputs of the server.

Descrambling of the program can be processed either already on the server or locally at the client box. Almost all of these wired or wi-fi solutions are very proprietary and with limited flexibility and extremely expensive. More-less, it's just a smart development of 'proprietary dual receivers' with all it's disadvantages.

Wi-Fi systems: The best solution is no additional cabling, using the existing base of receivers and staying flexible for their future deployments. The solution has to be transparent to a customer, signal distribution and for Conditional Access System (CAS). Of course, it must provide full control of attached receivers and stay as secure as CAS can be.

SmartWi the best solution

We have found SmartWi system as the best solution for meeting our requirements and for cable operator's business deployment. We emphasize security and reliability aspects of this solution. By our knowledge, based on the usage of SmartWi system, this system provides as secure solution as CAS itself. Pairing is a must for keeping adequate control over the smart card usage.

Using pairing feature (1:N) of CAS brings full control over receivers attached to one smart card. Communication between main unit and clients is based on widely accepted and strong security standards and is



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transparent for our CAS. Simple, safe and flexible.

Experiences

We were very pleased by the customers' feedback after the introduction of multiroom solution to our official operators' portfolio. High demand of our existing and potential customers for multiroom solution

Operational experiences and real application cases positively accelerated further development of the product.

and, of course, not limiting solution, has turned onto following statistic (based on operation in Slovakia):

- After 18 months operational usage, penetration of this solution has achieved around 10% of all existing customers.
- It reaches around 40% penetration of new customers contacted since this solution is available.
- Around 30% of our customers have taken 3 and more clients solution.

Operational experiences and real application cases positively accelerated further development of the product. From the technical point of view, we have solved 'hybrid pairing operation' cases e.g. combining older memory paired boxes with newer chipset paired boxes.

Furthermore, initial set-up has been even more simplified and significantly improved the robustness of the whole solution in more interfering environments. Recently demanded changes, such as 'tiny client form' or 'higher signal range' and many more have been reflected in coming new generation of the product.

Future expectations

As an operator, we are logically focused on the simplicity. It lowers down the operational cost and increases customer's satisfaction. Everyday usage of any system brings ideas for the future. For example, bringing this solution to 'standard-like' level and its integration into new generation of boxes, or, 'one button push' set-up, autonomic frequency scan and selection, etc.

Set-top-boxes used by SATRO for Conax CAS

- SD Zapper: Kaon KCF-220SCO, Kaon K-E2220CO and Kaon K-ES2270CO,
- SD PVR: Arion AC-9410PVR(h),
- HD Zapper: Kaon KTSC-S660HD,
- HD PVR: Kaon KCF-B3001HCOC,
- CAM (for usage in DTVi or in PC products): Technisat TechniCrypt CXV and SMiT CP CAM.

All SATRO boxes and CAMs support pairing and have passed Conax's Conformity Test and Security Evaluation.

smartwi II technical info

The SmartWi II is a revolutionary wireless card splitting system allowing the user to apply one or two subscription smart cards with up to seven receivers.

Stable, simple and easy to use, the SmartWi II Card Splitter requires no computer experience and zero maintenance. The SmartWi has been designed to hide the complexities of setting up wireless communication lines while at the same time giving ease of use. The card splitter will connect to the digital receivers by the wireless slave/client cards which will be inserted into the receivers' cam slot or card reader. Comes with 1 card reader and an optional 2nd card reader.

SmartWi II Master Box

The SmartWi II Master Box uses a fast microprocessor to control both the card reader functions and wireless transmission.

- Size: 116 x 70 x 17mm
- Conforms with ISO 7816 standard
- Optional 2 subscription card operation
- Host device auto detect clock speed
- USB2 connection for firmware update & supply power
- Built-in antenna for wireless communication with slave card
- Minimum 15m wireless indoor range
- Auto re-start after power failure
- Stand alone operation
- Very fast master-slave communication (>30 KBytes/s)
- LED operation indicator



The new SmartWi II Master Box comes in a slim, pianoblack design. The Operator smartcard is inserted at the bottom of the SmartWi II Master Box and invisible during normal operation.

SmartWi II Client Cards

The SmartWi II Client Card uses a small microprocessor to handle both communication with the receiver and the wireless transmission.

- Size: 109 x 54 x 0.6mm
- Conforms with ISO 7816 standard
- Auto detect clock speed from the receiver
- Firmware updatable through SmartWi II Master Box
- Built-in PCB antenna for wireless communication with master box
- Minimum 15m wireless indoor range
- Powered through receiver cam / card reader