Operational stakes

Content protection: a fast-changing world

Changes in the digital television sector have modified the conditions in which operators work and brought about fundamentally different security requirements. It is thus essential to monitor market trends and to be able to counter new forms of piracy attacks. The security solutions and technologies must also evolve. On these two fronts the Kudelski Group has deployed a multi-faceted strategy.

1. **Security segmentation per product line**
   Kudelski has distinctive solutions according to the operator's platform and services, be it premium digital television or basic access digital television. Furthermore, each of the platforms – DTH (wide broadcasting, no return path required), Digital Terrestrial Television (local broadcasting, unidirectional), cable (interactive broadcasting), IP or mobile – benefits from specific solutions adapted to its particular context.

2. **Segmentation of security technologies**
   Based on these product lines, each solution is optimized according to the specific local needs of each operator, in an ever more global environment.

3. **Secure specifications for decoders**
   Complementary to the security ensured by a smart card or a security module, the Kudelski Group developed a series of technologies integrated into the decoders that fundamentally improve the level of protection against various forms of piracy. Having become with time mass-market products, decoders may no longer strictly meet the same security standards as in the past. The Nagra specifications, specially adapted to these new markets, make it possible to restore an optimal security balance.

4. **A global approach to the anti-piracy combat**
   Each day the pirates become more international; the Group is gradually extending its anti-piracy fight based on a new and more global approach.

5. **Dynamic monitoring of operators' processes and contents**
   Experts of the Group exercise a permanent monitoring of the systems in place at client operators throughout the world. Technical and economic risks are identified and qualified; observations issuing from this monitoring are integrated into a dynamic security systems development process leading to the deployment of software countermeasures and other corrective actions.

This security strategy in five stages is integrated into the Nagra security philosophy based on NASC (Nagra Advanced Security Concept) and NOCS (Nagra On Chipset Security) concepts. These concepts enable the Group to maintain a clear and transparent approach to security requirements with partners and, as a result, ensure maximum security to operators.

"Swiss made" quality

In the Kudelski Group, the notion of quality is a fundamental value. It represents a permanent process, intimately related to each stage of the content protection process: solution design, development, deployment and follow-up. The main purpose of quality control is client satisfaction but it is also an important component of effective mid and long-term cost management.

The Kudelski Group's Quality Assurance teams are located in Cheseaux, Denver and Paris. Independent of R&D, they operate transversally in the Group structure. They are responsible for defining the methodology, processes and tools that will ensure quality whilst applying industry standards. They manage the integration and validation test laboratories designed to proactively detect and correct problems throughout the cycle of a product running from development to delivery.

Quality Assurance works closely with key operators to define personalized control criteria and processes that may vary according to the operators' specific requirements and environment. This flexibility and reactivity represent one of the Group's strengths and enable it to establish long-term partnerships with key customers.

Smart card production centers are in charge of their own quality control system, adapted to hardware production lines and defined within the Group according to the most rigorous standards of the industry.

Production: a strategic aspect

The control of security throughout the production process requires special conditions; to protect industrial secrets, some of the production aspects cannot be entrusted to third parties. This control is one of the important aspects of the Group's capacity to guarantee operators content and service security over the long term.

The Group handles in-house its own strategic processes and competences. The security of access control systems, head ends and decoder components is managed by dedicated teams in a highly secure environment.

Smart card and system design is handled by NagraCard and Nagra France, whilst the physical manufacturing of smart cards is achieved by NagraID.

Customer support

Customer support in general, but especially after-sales support to operators, has been significantly reinforced during these last years.

The Service unit, spread over six geographical areas, ensures optimal proximity to customers throughout the world. Its system engineers intervene directly on the sites of the operators. In addition, program managers take care of the systems delivery and ensure their conformity with contractual terms with regard to specifications, costs and delivery dates.

The Group has a worldwide, 24-hour, 7-day hotline support. Many problems are solved without requiring traveling thanks to the Remote Access Room (RAR) that enables Kudelski's engineers to remotely act on customers' systems out of the Group's premises in Cheseaux.

The feedback process that integrates data coming from the field proves particularly valuable and represents a very important source of information to improve the management of innovation. It further reinforces relations between the Group and the operators, enabling the latter to take part in the development of innovative solutions. The Kudelski Group uses this source to document its knowledge base and to provide input for a permanent process of self-analysis to improve its solutions and its organization. With this same aim, the Group regularly conducts client satisfaction studies establishing precise and measurable reference marks to identify potential further improvements.