Kudelski Group
Annual report 2003

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An impressive installed base

1 DTV operator with more than
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access modules

8 DTV operators with more than
2 million active smart cards/
access modules

13 DTV operators with more than
1 million active smart cards/
access modules

33 DTV operators with a potential
of more than 1 million active
smart cards/access modules

Message from the President

2003 was certainly a pivotal year in the history of the Kudelski Group. It was marked by changes in the environment and in the rules of the digital television sector, the Kudelski Group's core business. However, it was a positive year as the instability that dominated at the beginning of the financial year gave way to promising growth over the last few months of the year.

We did not achieve a return to better days simply by waiting for the storm to pass. An extremely competitive struggle broke out among access control systems suppliers at the beginning of 2003, during which our Group succeeded in winning significant market shares. In Europe we triumphed in the German satellite and cable markets (Premiere and MSG, respectively) and in the Spanish satellite market (Digital+). These were crucial successes as they allowed us to more than double the size of our installed base in Europe compared to 2002. The Group also continued to make remarkable progress in Asia.

Alongside organic growth efforts, the Kudelski Group management successfully conducted the largest acquisition in the Group's history: MediaGuard, the world's third largest access control supplier and a division of Canal+ Technologies.

The gains in market share through organic growth and acquisitions were achieved under a management team that had been restructured and strengthened at the beginning of 2003. The team demonstrated its capacity to handle several major challenges simultaneously:

– the turnaround in the digital TV activity
– the acquisition of new strategic customers
– the acquisition of the world's third largest digital TV conditional access supplier
– the delivery to schedule of major projects, particularly in Germany
– the introduction of a new rental-based business model
– the maintenance of a high profitability level in the public access sector despite a particularly difficult economic climate

Over the course of 2003, the Kudelski Group focused upon achieving strategic objectives not yet reflected in the income statement. What might be interpreted merely as the Group getting back into profit actually evidences the effects of changes that leave us poised to take advantage of some exceptional assets in 2004: a presence and market share never before achieved in digital TV and a significant installed base in rental mode, guaranteeing solid recurring revenues over the long term.

The Nagra Public Access activity displayed remarkable resistance given the extremely unfavorable economic climate prevailing in this sector in 2003. Despite external difficulties, this entity achieved a good level of profitability and increased its technological and commercial investments. It is thereby laying the foundation for its own future growth, particularly outside the European market.

With a balanced presence worldwide, the Kudelski Group is now particularly well placed in the television market. Our business enjoys a strong position in all the mature markets such as the Americas and Europe, as well as the emerging markets of China and India. As the market leader in Europe, the Group now has a sufficient source of income in Euros and Swiss Francs to counterbalance an important portion of its fixed costs denominated in these currencies, thus reducing medium and long-term foreign exchange risks.

We now face major new challenges of a nature quite different to those encountered in early 2003. While the cards have been extensively redistributed amongst the principal European competitors, the issue today is to take the right technological options for the future.

It is therefore essential for the Kudelski Group to make the appropriate strategic investments while paying particularly close attention to convergence between the different content distribution solutions. That will allow us to seize opportunities covering larger segments of the market than in the past. More specifically, it will require Nagravision to extend its security offering to cover two growth areas: basic encryption for cable networks and the distribution of high value-added content through other networks than those currently used, particularly through IP networks.

2004 should be an excellent year at operational level. The order book is exceptionally full, placing further pressure upon our production staff. For the second successive year they will have to handle a growth of more than 50% in delivery volumes. Alongside this faster pace, the harmonious integration of MediaGuard (Nagra France) remains an essential objective for the year 2004.

Yet again, the Kudelski Group has demonstrated its capacity to bounce back in an unstable environment. Despite the obvious risks, this climate worked in our Group's favor because, by contributing to shaking the vertically integrated structures of the digital television industry, it gave us the opportunity to conquer market shares that had been so far inaccessible.

If existing positions can be consolidated during periods of growth, phases of instability, whether economic or technological, provide the opportunity to move up to a higher level provided that one can display flexibility and determination. This is what we have managed to achieve, thanks to our motivated teams and stable shareholders. I would like to take this opportunity to pay tribute to those whose hard work made this mutation possible.

In a business sector that is characterized by rapid shifts in the balance of forces, the future will be neither easy nor straightforward. Nonetheless, I am convinced that we have the technologies and the willpower to face that future with confidence.

André Kudelski

Key figures

For the year 2003, revenues increased by 2.5% to CHF 412.4 million. The digital TV market recovery in the second half of 2003, the initial effects of new contract wins and a well-managed restructuring program led to a CHF 10.1 million EBIT, up CHF 42.1 million compared to 2002, in spite of a weakening USD.

Net income reached CHF 33.2 million, up 230% on 2002, including strong financial results.

In 2003, the Group achieved the best ever cash flow from operating activities of its history at CHF 39.3 million, reflecting in particular a material improvement of the working capital situation.

Financial figures in kCHF	2003	2002	2001	2000	1999	1998
Total income	412 392	402 355	455 445	359 527	214 737	112 323
Margin ACMS (1)	254 948	250 033	269 794	178 316	103 371	72 289
OIBDA (2)	32 229	8 608	99 172	86 820	48 501	27 278
EBIT (3)	10 063	- 32 022	82 973	75 405	40 388	25 038
Net Income	33 167	10 031	72 086	66 618	35 427	16 468
Equity, including minority interests	205 853	580 910	580 851	639 156	154 208	111 464
Net cash	-11 109	397 421	364 114	543 611	58 663	47 609
Number of employees (4)	1 400	1 220	1 173	425	239	170

(1) ACMS Margin: margin on goods and components sold
(2) OIBDA: operating income before interest, taxes, depreciation and amortization
(3) EBIT: operating income
(4) Employees: at 31 December of each year. For 2003, include MediaGuard
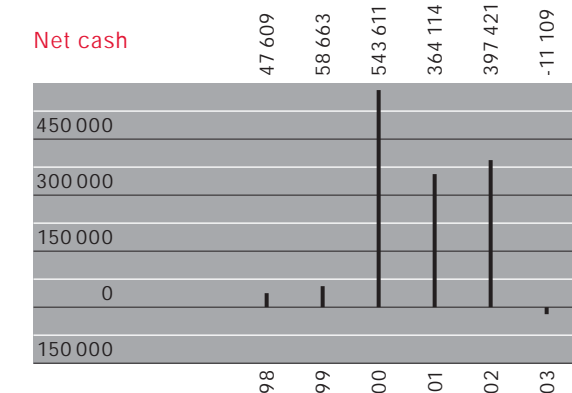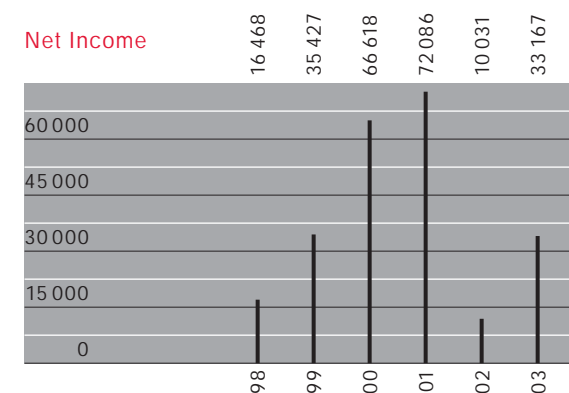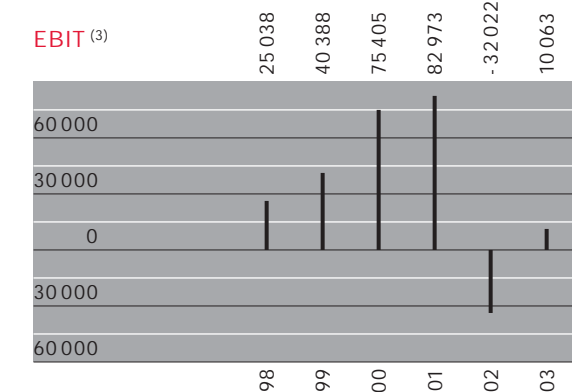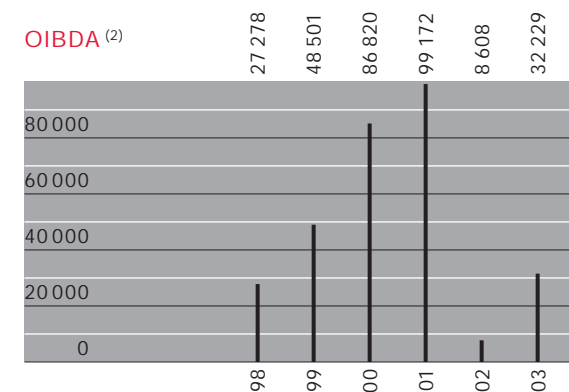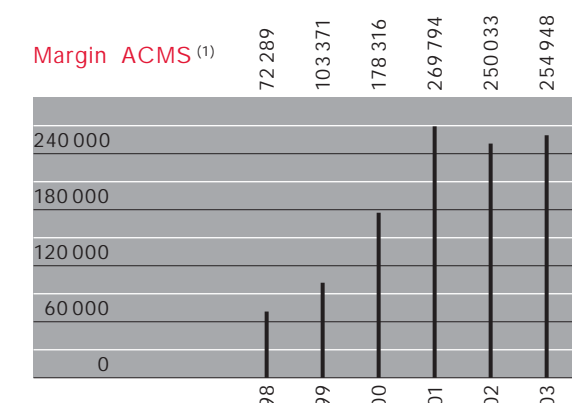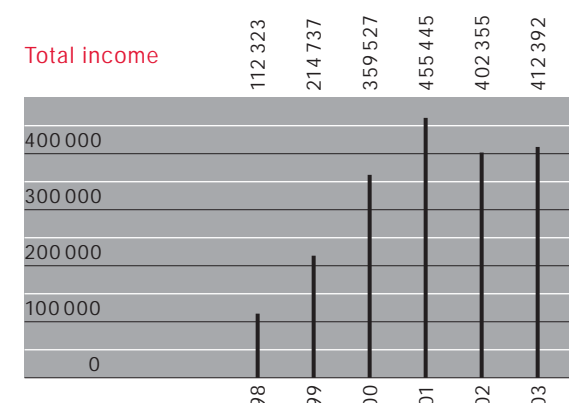
Historical overview

1951

Birth of the first portable recorder, the Nagra I.

1958

Release of the Nagra III, the legendary cinema recorder.

1965

First Nagra SN (Série Noire), the miniature device for secret agents.

1984

First portable professional video recorder, the Nagra VPR-5.

1986

The company is listed on the stock market.

1989

Canal+ adopts Kudelski's access control system for pay television.

1991

André Kudelski succeeds Stefan Kudelski.

First million analog decoders sold.

Conditional access television systems become Kudelski's core business.

1992

Creation of Nagra+, a joint venture with Canal+.

Launch of the Nagra-D, the first portable professional 4-track digital recorder.

1995

First order (from EchoStar) for a Nagravision digital system, marking the arrival of Nagravision on the North American market.

The Dassault Group buys a stake in the company.

1996

85% of sales are achieved in the conditional access television sector.

Full conversion of the convertible bond (1986-1996) within the framework of a PEO.

1997

Nagravision breaks through in Europe.

Digital pay television becomes the company's core business sector, in place of analog.

Nagra Audio launches a range of high-end Hi-Fi products.

1998

Nagravision conquers the British cable market.

Creation of NagraStar, a joint venture with EchoStar, and of NagraCard.

First systems offering mixed pay TV/Internet solutions.

Capital increase and first indirect split of the Kudelski share (5+1).

1999

First encryption systems designed for broadband networks.

Creation of MediaCrypt and investment in NagraID.

The company becomes a holding company.

Kudelski stock is listed on the principal market of the SWX Swiss Exchange.

2000

Investment in SportAccess.

The Group continues to expand in the field of the secure distribution of digital content over broadband networks.

Capital increase and second indirect split (12).

Introduction of Kudelski on the SMI (Swiss Market Index) and MSCI (Morgan Stanley Capital International).

2001

Acquisition of SkiData.
Acquisition of Ticketcorner.
Acquisition of Lysis.
Acquisition of Livewire.
Creation of AccessArena.

The Kudelski share is split by 10.

Launch of a convertible bond of USD 325 million. The operation is heavily over-subscribed.

2002

A difficult year for Kudelski, which suffers the impact of the crisis in the digital television market, particularly in Europe, and of unfavorable developments in the foreign exchange markets.

After a ten-year period of uninterrupted growth, the Kudelski Group issues the first profit warning in its history.

The company carries out an in-depth review of its structures.

Creation of the holding company Nagra Public Access (grouping together the companies SkiData, Ticketcorner and SportAccess).

2003

Recovery of the digital television market. The company signs major new deals (Germany, Spain).

The digital television unit is reinforced with the acquisition of the MediaGuard activity of Canal+ Technologies.

The Kudelski Group becomes world leader in the field of conditional access solutions.

Kudelski Group companies

Digital TV

NAGRAVISION

Nagravision: integrated security software solutions for digital television operators and content providers.

NAGRA FRANCE
MEDIAGUARD

Nagra France: MediaGuard integrated conditional access solution also including advanced pay-per-view functionality.

N a g r a r d

NagraCard: security technology using smart cards for digital television and other applications such as physical access.

nagra ID)

NagraID: development and production of modules and smart cards for contact and contactless identification systems.

nagra star
A KUDELSKI - ECHOSTAR JOINT-VENTURE

NagraStar: conditional access and smart cards used by EchoStar's DISH Network American satellite television system and companies affiliated to EchoStar. Equally owned with EchoStar (USA).

LIVEWIRE

Livewire: development of software for digital decoders.

LOGIWAYS

Logiways: digital television navigation software products.

NAGRA +

Nagra Plus: security systems for analog pay television. Equally owned with Canal+ (F).

C
M e d i a **C r y p t**

MediaCrypt: fundamental encryption technology based on Ascom's IDEA™ algorithm. Equally owned with Ascom (CH).

LEMAN CONSULTING S.A.
Intellectual Property Rights

Leman Consulting: patent and intellectual property management.

Canal+ Technologies: joint-venture company equally owned with Thomson (F), whose role is to manage the patents portfolio and patent applications for MediaGuard pending at 31.12.2003.

Public Access

SKIDATA
access unlimited

SkiData: integrated access and management solutions for car parks, ski-lifts as well as sports, culture, entertainment and exhibition facilities.

TICKETCORNER

Ticketcorner: one of the principal ticketing organizations in Europe.

SportAccess
Kudelski Group

SportAccess: open-ended rights and services management solutions for hospitals, universities and corporations.

ACCESSARENA

AccessArena: destination management solutions enabling visitors to a tourist region to access different services using just one smart card.

TOURIST DATA SHOP

Tourist Data Shop: platform for the reservation and purchase of online products and services in tourism.

Nagra Audio

NAGRA

Nagra Audio: portable digital recorders for professionals; products in the high-end Hi-Fi sector.

The Group recovers in a convalescent market

The year gone by
The Group recovers in a convalescent market

A year of transition

The depressed economic climate over recent years had a marked effect on many sectors to varying degrees of severity.

The sectors in which the Kudelski Group operates did not escape these difficulties. Digital television in particular went through a period of turbulence between 2001 and 2002, mainly in Europe where many major operators were faced with a decline in their financial capacity. The markets had to get back on track through restructuring, consolidation and stabilization processes.

The year 2003 may be regarded as a year of transition. The digital television sector gradually got back on its feet and regained some of its strength, particularly during the second half of the year.

The fruits of restructuring

The crisis period placed heavy constraints on the Kudelski Group. Rather than adopt a passive response to those constraints, however, the Group took the opportunity to apply some self-analysis, leading it to discover the seeds of a new dynamic. The reorganization of the Kudelski Group, which began in 2002 and came to an end during the second half of 2003, enabled a reassessment of the balances of the business so that these could be adapted to the new reality of the market.

The renewed growth that the Group achieved during the second half of the year is a reflection of the effectiveness of these measures. They permitted a CHF 37.2 million reduction in operating costs, despite higher sales and the deployment of several new systems such as Premiere, cable installations in Germany, C&M in Korea, StarHub in Singapore and an analog system for Canal+ France, among others.

Following a period of uncertainty, then, we are now embarking on a new cycle with encouraging prospects for 2004.

Strengthened management

The appointment of Pierre Roy (COO Digital TV), Charles Egli (CEO Nagra Public Access), Mauro Saladini (Group CFO) and Alan Guggenheim (already CEO of NagraStar) in early 2003 allowed us to significantly strengthen the Group management from an operational and strategic standpoint.

This trend continued in early 2004 with the appointment of Adrienne Corboud Fumagalli to the post of Executive Vice President in charge of Business Development and of Nicolas Gœtschmann as Corporate Secretary to the Group. Two new CEOs were also appointed for subsidiaries of the Group: Philippe Alcaras for Nagra France (MediaGuard) on January 1, 2004, and Christian Dreyer for SkiData on May 1, 2004.

In addition, the second half of 2003 saw the structure of the Group Finance Department strengthened still further through the appointment of two new executives, Hugo Rohner as Head of Controlling and Laurent Kæslin as Head of Accounting.

In response to the increasingly complex nature of the digital television sector, John Lin was hired as Senior Vice President in charge of Product Development from early 2004.

New processes

New processes have been introduced, particularly in finance management. The Group completed the conversion of its financial statements to IFRS standards (International Financial Reporting Standards). The application of these standards from January 1, 2004 will allow the annual results to be published according to IFRS standards at the end of 2005, with comparative figures for the previous year.

The Group established new internal reporting processes to allow more regular monitoring of its operations as well as improved forecasts. Regarding treasury, new methods of managing liquidities and an optimized hedging system were also introduced.

Lastly, the introduction of a new process for the monitoring of the debtors' collection enabled a significant reduction in the accounts receivable balance over 2003.

Review of business lines

Several activity lines have been sold or discontinued. These include Lysis UK, e-prica, Political Rights (Polirights), companies belonging to the SportAccess Kudelski group and the Systems group (all of this business is now under SportAccess SA in Sion) as well as the audio subsidiary in Germany. The projects portfolio has also been reassessed and rationalized.

Introduction of a new business model

In addition to the sale of systems and smart cards, Nagravision introduced a new rental-based business model in the second half of 2003 that includes the installation of a conditional access platform against payment of monthly subscriber fees. This solution allows Nagravision to be less dependent on operator growth. Additionally, revenues are spread more evenly over time and are less subject to the vagaries of the economic climate.

Compared with the traditional model, the new lease model leads to lower revenues and profitability for the year of deployment. While it dampens down the impact of the contracts won in 2003, it will contribute to boost revenues from 2004 on.

This system has the benefit of reconciling the interests of the access control supplier with those of the operator. The operator avoids the costs inherent to purchasing a system and instead pays according to the number of subscribers that it has.

Premiere is the first Nagravision customer to benefit from this leasing approach. Many MediaGuard customers are already operating under this mode.

Digital television: the conquest of world leadership

The configuration of the European digital television market has changed fundamentally in just one year. Dominated by vertically integrated groups, it went through massive restructuring that resulted in the consolidation of the new players in the sector.

The Kudelski Group succeeded in seizing the opportunities created by the reshuffling of cards. Following a series of triumphs, it strengthened its position on several fronts and achieved world leadership in the conditional access sector.

A remarkable breakthrough was achieved in Germany thanks to agreements reached with the leading operators in that country. The acquisition of MediaGuard in France also enabled the Group to score further successes in several other key markets, especially France itself and a number of countries in Asia (Malaysia, China) and the Middle East.

In addition to these deals, the Group announced several new contracts during 2003. These included Digital+ (Sogecable/Via Digital merger) in Spain, TV Cabo in Portugal, C&M and Qrix in Korea, Atlantic Telecom and Iowa Network Systems in the United States and Raj TV in India.

Breakthrough on the German market

The Kudelski Group had until then not achieved a significant presence in the digital sector in Germany. The 2003 agreements signed with the leading German operators, Premiere and Kabel Deutschland GmbH, alter that situation radically and establish Kudelski as a major player in this market.

This success is strategically very important for the Group as it makes Kudelski's technology a standard in one of Europe's flagship markets and is likely to bring other significant developments in its wake.

Acquisition of MediaGuard

The other key event in the 2003 financial year was Kudelski's takeover of MediaGuard, the conditional access entity of Canal+ Technologies, itself a subsidiary of the French Group Thomson since the beginning of 2003.

MediaGuard, the world number three in the conditional access sector, serves more than 10 million active subscribers. Well placed in the satellite market, it complements Nagravision's cable subscriber base in Europe and allows the Kudelski Group to assume global leadership in the conditional access sector.

This acquisition is of strategic importance to the Group and puts it in a good position to benefit from the ongoing consolidation process among European operators.

MediaGuard's activities and staff have been integrated into the Nagra France subsidiary in Paris, which is 100% owned by Kudelski.

Human potential to capitalize on

Like the other Kudelski Group entities, one of MediaGuard's greatest added values resides in its human resources. Two hundred staff are joining the Group, bringing with them much sought-after talents, skills and expertise. The cooperation between the MediaGuard and Nagravision teams as well as the creativity and innovations that are already stemming from this work represent major assets for the future of the Group.

Well thought-out integration
The definition of the respective roles of Nagra France and Nagravision, together with the early establishment of principles of cooperation between the two organizations, enabled the implementation of a rapid and smooth integration process that did not affect the course of business.

The new Nagra France organization was in place from the beginning of 2004. A CEO and a management team have been appointed. The sales and services organization has already been restructured. These efforts have borne fruit: in early 2004, Nagra France announced that it had signed its largest contract for many years with the operator Top Up TV in the United Kingdom.

From a technical point of view, the integration process is still ongoing. Projects are assessed on the basis of the new MediaGuard and Nagravision combined products portfolio. At the same time, teams are working to define a joint platform integrating the best-of-breed components from both the MediaGuard and Nagravision environments as well as client-specific customizations of this platform.

Consolidation of the public access activity

Nagra Public Access posted good results for 2003 despite the slowdown that affected the sector. Public access is an important sector of activity within the Group, accounting for 43% of its income in 2003.

The initial phase in the Group's planned reorganization and consolidation in this sector was completed partly thanks to a improved synergies between the companies (at a technical and commercial level) and partly through the acquisition of external competencies.

This work clearly paid off: Ticketcorner tickets, the format of which has been standardized, are now fully compatible with SkiData access systems.

The restructuring work carried out by the Group has also allowed it to exert greater control over structural overheads and operating costs.

Good progress for SkiData

SkiData continued to gain new customers, particularly in the high-potential parking sector. The major deals signed include those with the seven leading airports in Norway, the Unique airport in Zurich and several major shopping malls.

The acquisition of Labitzke Schaffner AG, which markets SkiData car park access systems in Switzerland, has allowed SkiData to strengthen its position in this market. Labitzke Schaffner was integrated into the Kudelski Group through its SkiData (Switzerland) subsidiary at the end of 2003.

SkiData has strengthened its position as world leader in the ski sector thanks to a large number of new contracts in Europe. The company has also signed important contracts in the Japanese and American markets (Niseko and Aspen, respectively).

Ticketcorner prepares itself for international expansion

Ticketcorner laid solid foundations in 2003 with a view to international expansion. The company completed the integration of Qivive, deployed its new technological ticketing platform TicketSoft and established a strong presence in the German market.
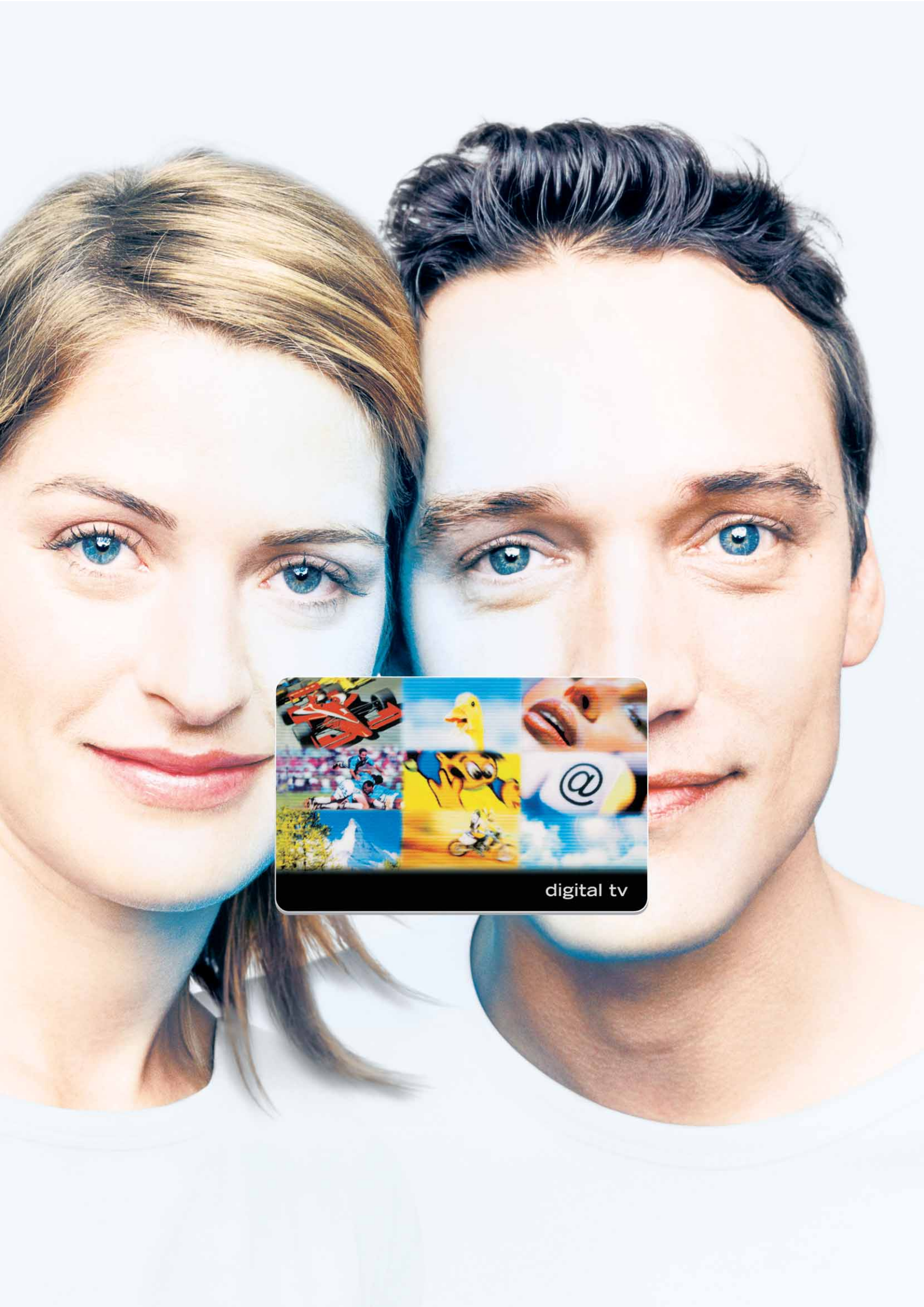
Excellent prospects for 2004

The Kudelski Group expects to achieve excellent progress in 2004.

The many contracts gained in the early part of the year are evidence of a new dimension in the growth of the Group's business. Thanks to the innovative capacity of its companies, brand new projects offering huge potential are in the pipeline: basic conditional access for KDG, pre-paid cards for Premiere and terrestrial VOD broadcasting security for MovieBeam (Disney) are just some of the projects that the Group announced at the start of the year.

The situation concerning smart cards – a key performance indicator for the Group – is more promising than ever. The order book is already extremely full, both for rental mode and traditional sales mode cards.

Card swaps for some customers, expansion of the lease model and a solid customer base of large operators are amongst the parameters that suggest a vintage year for the Group in 2004.

Digital television

A favorable evolution for the Kudelski Group

Markets in 2003: the recovery

Digital television
A favorable evolution for the Kudelski Group

Kudelski world leader in a growing market

The Kudelski Group has been active in the pay TV sector – first with analog, then with digital systems – since the late 1980s. Over two decades, it has followed a trajectory that has now brought it to the world's leading position in its sector. As one of the early players, it has accumulated a unique track record in access control solutions applied to the most diverse digital broadcasting needs.

These solutions are now chosen by many operators thanks to their proven reliability and the quality of their engineering.

The transition to digital is taking place worldwide, providing a multitude of new opportunities for both operators and users. In order for these opportunities to materialize, technology suppliers must not only offer state of the art solutions (particularly as regards security), but also demonstrate an ever greater capacity for innovation.

Kudelski's major assets

Conditional access, the key to security and revenue increase

The Kudelski Group supplies a strategic element in the digital data transmission process: the conditional access system. Its solutions enable operators to distribute all types of content with a high degree of security.

Thanks to their very high performance functionalities, Kudelski's systems greatly extend the diversity of the services that the user can be offered: programs and films on demand, on-line games, e-commerce, Internet access etc.

They meet a fundamental need on the part of operators: the transition to digital or the full use of the potential of digital technology is only justified when it allows operators to expand their revenue sources and make their investment more profitable. Security is at the heart of these requirements.

Flexibility and modularity

TV platforms comprise elements from many different suppliers. Broadcasting modes are also varied and often hybrid, borrowing from some or all of terrestrial, cable, satellite and other transmission technologies.

It is therefore important for any supplier of digital technology to provide solutions that adapt to every possible configuration. The flexibility that characterizes the Kudelski Group relies on two factors: the Group's independence and the open architecture of its solutions.

digital tv

Independence and open architecture

The Kudelski Group's independence is one of its great strengths. It boasts great flexibility in its technological options and its partnerships. The Group can react with all the speed and flexibility required in order to meet operators' specific needs. This neutrality is particularly important where it acts as a global integrator.

In addition, the open architecture of Kudelski's security solutions and conditional access systems allows them to easily integrate into existing systems. This also ensures rapid deployment – a key advantage when it comes to cost. In order to achieve this, Nagravision has worked over many years to build privileged partnerships with most of the players involved in the creation of a digital TV platform: suppliers of head-end infrastructure, decoders, interactive applications or content management systems. Nagra France also adds to this portfolio, bringing in other partners to complement those of Nagravision.

The Group works with all the largest consumer electronics manufacturers and its technologies integrate with more than 50 decoder suppliers.

A dynamic security concept

Security systems cannot be fully effective unless they are able to continuously adapt to the new threats to which they are exposed.

The solutions that Kudelski has deployed for operators are subject to constant technological monitoring in order to identify piracy risks. The results of this monitoring feed into the dynamic systems upgrading process. Systems are designed to be upgraded as much as necessary throughout their lifecycle in order to maintain their security at the highest level.

Security reinforcement for decoders

Security is a global issue. Therefore, it is very important that all the elements that go to make up a digital television platform meet the strictest possible security requirements.

Particular attention is paid to decoders, which are one of the key elements of the security system. During 2003, Nagravision established a security concept that includes recommendations intended for decoder manufacturers. These relate to the design and manufacturing of decoders in terms of both software and hardware. The objective is to make access to certain crucial parts of the decoder more difficult, or even to block certain sensitive operations and therefore increase security.

Protection and development of intellectual property

Control over intellectual property is a strategic issue within the sensitive field of security.

A company that has its own patents covering key inventions will be able to enjoy a greater degree of autonomy and to keep inside the company knowledge that is crucial to competitiveness. Meanwhile, commercial use can be made of other patents so that these too become sources of revenue.

The Kudelski Group holds a portfolio of more than 1 300 patents and trademarks. It has allocated the management, protection and development of these assets to its subsidiary Leman Consulting.

The agreement reached with Thomson in August 2003 also provides for a strategic partnership in the field of intellectual property. The two Groups have created a joint-venture company designed to exploit patents and to market licenses to third parties.

A complete range of innovative solutions

The Kudelski Group boasts a broad range of in-house skills in the field of digital television.

It is able to provide integrated or modular solutions designed to manage and ensure the security of the entire content distribution chain of a digital TV platform: conditional access for broadcast or IP networks, content management, copyright management, fundamental cryptography, decoder software and smart card security technology.

The expansion of video on demand (VOD)

Of the new services offered to subscribers, VOD is now the one that arouses the most interest.

Nagravision has brought out developments in this field over the last two years. In 2003 these led to the delivery of comprehensive VOD systems. The Korean cable operators Qrix and C&M Communications, customers of Nagravision, acquired such systems.

A solution for DVR

The DVR market (Digital Video Recorder, or hard disk decoder/recorder) continues to develop. Some one million subscribers of the operator EchoStar already own such a device.

Nagravision has developed a secure Push-VOD solution specifically designed for DVR. Using the same security concepts as the Nagravision conditional access system, it applies to all digital content (films, games etc.) and is fully compatible with deployed systems. This Push-VOD solutions is data-path agnostic and allows distribution over satellite, cable, VSDL and IP. It was deployed commercially in 2003.

At the heart of the system: the smart card

The smart card plays a crucial role in the security concept as it protects and manages the decryption keys required for the decoder to operate smoothly and controls the system's various software functions. It also stores information about the user: access rights, transactions completed, credit available etc.

Kudelski smart cards include encryption algorithms recognized as being among the most secure in the world such as the IDEA™ algorithm supplied by MediaCrypt, a Kudelski Group company. The smart cards are subject to continuous development with regard to security as well as functionalities and design.

The growing number of applications in which the cards are involved means that their technology has to become ever more sophisticated. That is why NagraCard, the expert in the card sector, strengthened its organization and beefed up its staffing levels during 2003.

The Kudelski Group covers all its smart card production needs for television and public access applications through its company NagraID. This rapidly expanding company possesses highly specialized know-how in the production of cards and cold-insertion techniques. The Kudelski Group holds the patents covering these technologies.

Integrated technology

NagraCard's expertise and flexibility have enabled it to rapidly adapt existing solutions to new media integrated inside the decoder itself, in order meet the demand of certain markets. NagraStar and EchoStar, for instance, have introduced such a system for some of EchoStar's new decoders. Solutions of this type reflect the Group's security philosophy, as enhanced security capabilities are always ensured by smart cards.

Innovative projects for 2004

2004 is beginning with a series of projects that illustrate the Group's technological dynamism and introduce a new growth dimension into its business. The following projects offer some examples of this.

DRM solution for studios

Nagravision has developed a Digital Rights Management solution designed for major production studios as part of the MovieBeam project for Disney.

MovieBeam uses terrestrial signals to deliver video on demand content to consumers, downloading films to their MovieBeam decoders hard disks. Consumers can access a catalog of a hundred films (of which ten are changed each week) through a simple pay-per-view purchase.

The market for pay-per-view services offered by content suppliers is currently revolutionizing the film industry. The process is being accelerated by the breakthrough achieved in broadband communication media. There are not many players in this market and this was a real opportunity for Kudelski to gain a foothold.

The presence of Nagravision further up in the film distribution chain strengthens its position of leadership in digital content security irrespective of the service supplier or the network used.

DSL telephone network security

Another important Kudelski Group innovation is the deployment of a digital content security solution over DSL (Digital Subscriber Line) telephone networks with the largest French satellite operator CanalSatellite (3 million subscribers).

This company is relying on the strong foothold that DSL has gained in France in order to increase the penetration of its CanalSat service in areas not well suited to receiving satellite broadcasts, particularly heavily populated urban areas.

For the second phase of this process, CanalSatellite is seeking to increase income per subscriber through additional interactive services such as video on demand. There is clearly a strong degree of complementarity between DSL and satellite broadcasting networks worldwide, a development in which CanalSatellite has been a trailblazer.

The security solution selected by CanalSatellite for DSL relies on the Nagra France MediaGuard system already deployed on its satellite platform, with savings obviously accruing for the operator.

Basic conditional access

Nagravision has developed a basic conditional access solution for KDG (Kabel Deutschland GmbH) enabling authorization and authentication functionalities.

This solution is aimed at the full cable subscriber base, particularly those who have not yet opted for high value-added content.

Looking beyond the German market, there are already opportunities on the horizon for Nagravision in Europe, Asia and the United States for this technology.

Disposable cards

Nagravision has developed a pre-paid card for Premiere, the Blue Movie Card, containing access rights to selected content for a limited period of time.

This card is an innovative concept that allows consumers to access digital television products on a completely anonymous one-off basis without having to take out a subscription.

The solution gives operators many benefits: marketing campaigns to publicize their services, special offers for subscribers, distribution through retail outlets, the use or sale of the surface of the card as a communication or advertising medium etc.

In economic terms, such a solution also combines the advantages of pre-payment with a logistical cost saving on managing subscriptions to additional services.

Because such cards have a limited lifespan, they will benefit from the most recent technological security innovations.

Promising breakthrough in mobile telephony

The agreement reached with the semiconductor firm STMicroelectronics (STM) in late 2003 opens up a promising new market for the Kudelski Group's security technologies.

The agreement concerns the joint development of a SIM/JSIM card for mobile phones that allows telecommunications operators and applications suppliers to launch new services with a high degree of security.

This solution, which brings together the expertise of the two partners (micro-controllers for STM and smart card software developments for Kudelski), is designed for M-commerce applications (on-line commerce for mobile phones). Based on JavaCard™ 3G technology, it is fully compatible with all telecom standards. A high-performance turnkey product that is quick to deploy and can be delivered at a competitive price, it will be launched in 2004.

This development is particularly important. The widespread use of Kudelski technology in microprocessors designed for telephony offers immediate access to a very high-growth mass market.

Markets in 2003: the recovery

Germany/Austria

The signature of contracts with the two largest operators in Germany, Premiere and Kabel Deutschland GmbH, marks a turning point in the recent evolution of the Group. Thanks to these deals, Nagravision has become the de facto standard for the entire country, opening up promising new opportunities in Europe.

The work processes developed under these new agreements required a lot of creativity at both the technical and the commercial level. The resulting innovations and the success of these deployments have left Nagravision as the partner of choice.

Premiere
With 3 million subscribers, Premiere is the benchmark operator in Germany. Its subscribers are equally divided between cable and satellite.

For its second-generation digital systems, Premiere wanted to acquire a solution that enabled it to offer subscribers a wider range of services – representing new sources of revenue – and particularly to eradicate the widespread piracy it was suffering. This is what led it to launch a new partnership with Nagravision. The contract was signed in March 2003. Just seven months later, the platform was operational for all subscribers and all the cards had been changed.

A true achievement
The deployment of the new Nagravision platform within such tight deadlines represents one of the largest and most complex operations ever carried out in the history of digital television.

Part of the enormous challenge was the absolute requirement not to disrupt the broadcasting of the programs. The system also had to be fully compatible with the 350 types of decoder in use in subscribers' homes. It also had to include various new functionalities and meet extremely tough requirements with regard to security. A specific new version of the Nagravision conditional access system was implemented. It was adapted to meet Premiere's needs taking into account the operator's "historical" parameters.

ORF
ORF, the public television operator in Austria, selected Nagravision to deploy Premiere's services to more than 200,000 subscribers.

Kabel Deutschland Gmbh
KDG – Kabel Deutschland GmbH is one of the biggest cable operators in the world. The KDG network serves around 18 million cable subscribers, 1.7 million of whom are digital television subscribers.

In July 2003 Kudelski signed a contract for a comprehensive conditional access solution with MSG MediaServices GmbH, a fully-owned subsidiary of KDG responsible for the technical management of the parent company's digital platform and of the ISH, iesy and Kabel Baden-Württemberg cable networks.

The potential in Germany is huge as 27 million households are passed by cable.

France

France represented one of the Group's highlights in 2003. The year saw the acquisition of MediaGuard as well as an agreement with Canal+ on the deployment of a new version of the analog conditional access system.

Canal+ and Kudelski: historical ties
The position that the Kudelski Group now occupies in digital conditional access is due largely to the know-how developed for analog television.

The Canal+ group first demonstrated its confidence in Kudelski 14 years ago by commissioning Kudelski to implement its first content security solutions. This decision, which contributed to the success of Canal+, also led to the creation in 1992 of the joint venture Nagra+. These were the foundations on which the Kudelski Group built, investing to gradually become world leader in its field.

Signed in December 2003, the new partnership contract with Canal+ provides for the upgrading of the conditional access system used for the analog broadcasting of Canal+ Premium service in France and includes the replacement of the 3 million smart keys in the possession of subscribers. The latest Nagravision technologies will be implemented to upgrade the security of the system which was first deployed in 1990.

Spain

Created from the merger between Sogecable and Via Digital in Spain, Digital+ decided to migrate the entire combined subscriber base to Nagravision's Aladin family conditional access solution.

This contract, which covers 2 million subscribers, is evidence of the advantages that Nagravision can offer to customers who are searching for both cutting-edge technology and high-quality service.

Portugal

TV Cabo, the country's leading pay-TV operator, renewed its contract with the Kudelski Group for its satellite broadcasting system, now extending it to its new cable services.

Poland

The Kudelski Group is in a strong position in this market, where it boasts the two largest operators as customers: Polsat a Nagravision client, and Cyfra+, who is part of MediaGuard's portfolio of customers.

United Kingdom

After experiencing the strongest development in the world and achieving the highest rates of penetration, digital television has been through a difficult period in the United Kingdom.

After financial restructuring, the sector recovered its stability during 2003 and was able to re-launch a certain number of projects.

Starting up again on a healthier basis, the cable operators NTL and Telewest – Nagravision's customers – are preparing for renewed growth with a range of services designed to meet the new needs of the market.

In addition, the Kudelski Group gained a good position in the emerging UK digital terrestrial market thanks to the contract signed by Nagra France and Top Up TV in early 2004. This agreement provides for the deployment of the MediaGuard conditional access system in the UK terrestrial broadcasting market.

Top Up TV aims to offer ten of the UK's best channels in return for a commitment-free monthly payment. Top Up TV serves the Freeview subscriber base using already deployed decoders to which other units will be added.

Switzerland

Nagravision occupies an excellent position in its domestic market with installations essentially deployed on cable networks.

In 2003, Nagravision installed a conditional access system for the Digital Cable Group (DCG) consortium, which broadcasts from Zug, and provided EW Buchs with a turnkey solution.

The most significant recent achievement was the contract that Nagravision signed with Swisscom Broadcast in early 2004 for the development and integration of a whole new digital TV platform in Switzerland.

Lysis making progress

In the European market, the Kudelski Group's Lysis products have also proved an indisputable success. European operator Telenet had the Lysis iDTV content management system installed for its digital cable TV and video on demand services.

In addition, German-Dutch operator PrimaCom purchased a Lysis video server that will be fully integrated into its Lysis iDTV content management system in view of the development of its digital TV offering.

North America

United States – EchoStar, a satellite television giant

The Kudelski Group's longstanding partnership with satellite operator EchoStar (DISH Network) remains one of the cornerstones of its activities in America. The two businesses run NagraStar, a joint venture that supplies EchoStar and its associated companies with the conditional access systems and smart cards. This entity also has responsibility for research and development services, maintenance and integration.

EchoStar can be described in a few key figures. The operator, who launched its ninth satellite in 2003, covers 101 local markets, broadcasts 500 channels and provides more than 1 700 services using Kudelski security solutions. DISH Network subscriber numbers rose by 14% in 2003. As of December 31, 2003, it had 9.4 million subscribers, representing more than 17 million decoders and active smart cards.

EchoStar and SBC Communications, a major DSL services operator in the US, signed an agreement to supply combined broadband Internet, telephone and pay TV services. NagraStar is working in close collaboration with SBC and EchoStar in order to develop and set up the security solutions required for the implementation of these services.

EchoStar was the first customer to use the new generation of Nagravision access control system of the Aladin family. In 2004 NagraStar should replace more than 4 million smart cards at EchoStar with NagraCard's brand new generation of cards. Delivery is expected to be completed at the beginning of the second half of 2004.

The potential of cable

As of late 2003, Nagravision had a modest stake in the United States cable sector.

Today, this market is beginning to offer real opportunities for the Kudelski Group because of its size and also because regulatory changes are contributing to its opening up.

Having focused its efforts on achieving a significant improvement in its European market share in 2003, Nagravision's main priority will now be to make greater inroads into this market. An initial breakthrough was achieved in 2003 thanks to the contract signed with Atlantic Telecom for the deployment of digital TV services.

Canada

Bell ExpressVu the leading satellite operator in Canada, continued to progress well. The operator added 76 new services to its offering in 2003. These include additional high-definition channels, interactive programs and local and international channels.

Bell ExpressVu recorded a 6.4% rise in its subscriber numbers in 2003, hitting a figure of 1.4 million, which corresponds to more than 2 million smart cards in active use.

At a technological level, Bell ExpressVu decided to introduce a new Nagravision conditional access system of the Aladin family in 2003. This was in place for existing subscribers by December 2003. From now on any new subscriber receives a smart card based on the new technology.

Markets in 2003: the recovery

Asia

The Asia-Pacific region offers the greatest potential for development. The switch from analog to digital has only just begun, but when it does take full effect there will be promising opportunities for the players concerned. The Kudelski Group chalked up further successes in the region in 2003.

China

Nagravision systems are deployed on more than 20 cable sites in China, including the Shanghai Cable and Hong Kong Cable networks.

The acquisition of MediaGuard brought the operator Beijing Cable (BGCTV) within this prestigious portfolio of clients. The Kudelski Group now covers the three largest cities in the country.

The Nagravision systems already in place in China include the Dalian Tian Tu Cable TV network (2002), HeNan Cable TV in the Zhengzou region (2001) and the many digital cable networks belonging to the DVN Holdings group.

At the beginning of 2004, Nagravision completed the "localization" program required by the State Administration of Radio, Cinema and Television (SARFT). In addition, MediaGuard successfully finalized the technical testing procedures required for SARFT certification. These achievements further illustrate the Group's long-term commitment in China.

Malaysia

Astro Measat, the satellite operator and MediaGuard customer, continued to achieve strong growth in 2003. More than 375 000 new subscribers signed up to receive its programs, bringing the operator's total number of digital subscribers to 1.4 million. An extensive recruitment campaign enabled the operator to average 40 000 new subscribers per month over the final quarter of the year.

This development is explained by the quality and diversity of the Astro bouquet: in addition to channels intended for foreign communities in Malaysia, it includes a wide range of international services (CNN, HBO, Bloomberg etc.) as well as four Astro channels, including Astro Box Office, which screens major film productions.

Astro Measat was listed on the public market of the Kuala Lumpur stock exchange in late 2003.

The growth that Astro achieved in 2003 strengthens its position as the leading digital satellite TV operator in Asia.

Korea

Another important market, Korea is a technological driving force in Asia. The level of high-speed Internet connections there is the highest in the world.

In the wake of the contract signed with Qrix, the first cable operator to have migrated to digital, agreement was reached with C&M Communications Co. Ltd., a major MSO (Multi System Operator). This company opted for a comprehensive solution designed for a market of 2 million subscribers. Both operators also purchased a Nagravision VOD system.

Another deal closed in this market was for a Lysis iDTV content management and interactive applications solution supplied to the satellite operator SkyLife.

Alongside these contracts, Nagravision obtained OpenCable standard certification for conditional access from the Telecommunications Technology Association in Korea.

Singapore

Singapore's StarHub operator selected the Nagravision conditional access system for the launch of its digital cable television services. StarHub is the only multimedia operator in Asia to deliver multi channel television, data, voice and Internet access services over its broadband cable network.

Nagravision is the global integrator of the digital cable TV platform, which includes the Nagravision conditional access system and the Lysis content management system as well as decoders and interactive applications.

StarHub's offering will include pay TV channels, pay-per-view and NVOD (near video on demand) content. StarHub's broadband network has the potential to offer many other future interactive multimedia services such as home shopping, games, video conferencing, distance learning, electronic program guides as well as on-demand news and entertainment programs.

StarHub currently broadcasts more than 40 international channels of news, movies, entertainment, sports, music and education over its broadband cable network. It also offers cable TV through a wireless UHF (ultra-high frequency) and MMDS (multi-point, multi-channel distribution system) system.

India

Nagravision recorded its first success in this market in 2003 when it signed a deal with IndusInd Media & Communications LTD (IMCL), one of the leading cable operators of the country. 4.5 million households receive its InCableNet programs. IMCL is a subsidiary of the Hinduja TMT Company, which is listed on the Mumbai stock market and belongs to the Hinduja Group.

The operator appointed Nagravision as the global integrator of its digital TV platform. The latest generation conditional access system of the Aladin family will ensure the security of the digital pay TV services.

Indonesia

The Group continues to make progress in this market. After the sale of a system to Indosat Mega Media – the country's largest Internet supplier – for its cable subscribers in 2002, Nagravision supplied Broadband Multimedia with a system for the launch of its cable (Kabelvision) and DTH (SmartTV) services.

Philippines

Nagravision's foothold in the Philippines has been confirmed with the extension of its partnership with ABS-CBN Global Limited for the operator's European operations. Broadcast from the Philippines, ABS-CBN's services are directed at Filipino communities worldwide.

Nepal

Nagravision is making its first appearance in this market by supplying Space Time Network, the country's largest cable operator, with a conditional access system.

Middle East

The Kudelski Group has a well-established presence in the Middle East thanks to Orbit Satellite Radio and Television Network, one of the region's principal DTH platforms. Orbit broadcasts from Italy to the whole region and is equipped with a MediaGuard conditional access solution.

Public access

Public access
Steady progress

The Group has expanded into several new sectors offering promising opportunities for synergies with the its core business sector, digital television.

Kudelski laid its foundations in the public access sector in 2000, when SportAccess was taken on. SkiData, who joined the Group is 2001, reinforced this activity with its access control solutions for ski lifts, car parks as well as sports and leisure facilities. The same year, Ticketcorner brought to this entity its expertise in ticketing systems, its distribution networks and a direct access to consumers.

By creating synergies between technologies and establishing markets, the Group aims to develop an integrated electronic ticketing concept allowing consumers to reserve tickets via interactive digital television and to obtain direct access to the service or performance that they want.

The public access sector, which operates in a market that is much more fragmented than the digital TV market, requires particularly coherent structures. Therefore, a holding company was set up in 2003 under the name Nagra Public Access. This structure allows a better use of synergies between the different companies and facilitates technological harmonization.

A showcase of convergence

The Group presented the result of a typical development project based upon the concept of convergence at the ITU World Telecom 2003 exhibition in Geneva. The demonstration highlighted a new secure ticketing solution using both digital TV and mobile phone for public access applications: the consumer orders a ticket for a soccer match, for example, through digital TV. He receives the ticket over his mobile phone in the form of an SMS bar code. He then merely has to present his mobile to the reader terminal to gain entry to the stadium.

This solution shows how gateways can be created between the digital TV and public access sectors. It combines the skills of several companies in the Group: Nagravision for conditional access, the technology branch of Ticketcorner (Germany) for ticketing applications and SkiData for access infrastructure.

SkiData: an excellent year despite the economic climate

Strong progress in the Parking Division

2003 proved to be a positive year for SkiData overall. Alongside increased revenues, preventive cost control measures contributed to a significant improvement in profit margins.

A successful global offensive

The Parking Division made good progress in 2003.

There was strong growth in the UK market. National Car Parks, the largest operator in the sector, commissioned SkiData to establish a centrally managed network of 29 car parks in central London.

The division also succeeded in entering several Eastern European markets: contracts were signed for projects in Rijeka and Zagreb (Croatia), Budapest and Debrecen (Hungary) and Warsaw (Poland). These principally involve car park installations for major shopping centers. Other projects were carried out in this sector, notably in Australia (the Westfield Shopping Center in Canberra) and in France (the Rosny II shopping center in Paris).

Northern Europe is another area in which SkiData made significant progress. Among the leading projects carried out was the installation of parking systems at the 7 largest airports in Norway. The airport sector, in which SkiData is well positioned, enjoyed major expansion in 2003: new projects include parking systems for Zurich Unique airport in Switzerland, Göteborg City Airport in Sweden and the Hilton Hotel Heathrow in the UK.

SkiData has a strong presence in Switzerland, where more than 50 systems are installed. Labitzke Schaffner AG, a company which the Kudelski Group acquired in late 2003, carries out sales and marketing activities for this market.

In the United States, SkiData has successfully established a subsidiary, with its specific organization and products. 200 parking systems have been supplied over the past 3 years in this market.

Parking System SPT 400
The ideal compact solution for less demanding application scenarios such as communal parking or non-commercial on-site parking at hospitals, hotels, supermarkets etc.

Parking System SPT 450
The ultimate solution for complex requirements in medium-sized and large-scale commercial parking environments.

Launch of a new compact system

On a technological level, the launch of an entry-level system (the Standard Parking System SPT 400) was one of the success stories of the Parking Division in 2003.

SPT 400 is a compact solution equipped with cutting-edge technologies developed by SkiData for its more sophisticated parking management system SPT 450. While the traditional system is designed for medium and large-sized commercial facilities (city car parks, airports, convention centers, stadiums, shopping centers, etc.) the compact version caters for less demanding applications.

Based upon contactless technology and with an elegant design, this modular solution is very simple to use for car park operators as well as for consumers.

One of the advantages of the more sophisticated version of the system, the SPT 450, is that it accepts various ticket formats. It can function as part of a network and readily integrates with other systems that are in place. Additionally, this exceptionally robust and reliable system is user-friendly thanks to well-designed, intuitively operable graphical interfaces.

Record results for the Ski Division

2003 was one of the Ski Division's most profitable years.

In Japan, the major resort of Niseko was equipped with 50 ski access systems and 23 point-of-sale terminals. In the United States, SkiData's partnership with the domain of Aspen continued to make positive progress.

The installation of various facilities in Turkey, Serbia, Bulgaria and Russia (four domains for this market) allowed operators to increase their profitability.

In France, four resorts belonging to the national operator Transmontagne opted for a SkiData ticketing and access control solution. The systems deployed for Jungfrau-bahnen in Switzerland and in the Bregenzerwald region of Austria allowed SkiData to display its skills as a global integrator.

Growth in the Event Division

In 2003, sales in the leisure facilities sector enjoyed strong growth, especially in the stadium segment.

A major contract was signed for the delivery of systems to a number of soccer clubs in Portugal (FC Porto, Benfica in Lisbon, FC Farense and FC União de Leiria) whose stadiums will be used during the 2004 European soccer championships.

The innovative "Mobile TIX" solution, which is in line with the convergence concept, generated considerable interest among stadium operators internationally. Thanks to this system, an SMS message sent in the form of a bar code to the user's mobile phone serves as an electronic entrance ticket. Three Austrian soccer clubs have opted for this solution.

In the amusement parks sector, SkiData installed its first system in the United States at the Forth Worth Zoo in Texas. The Legoland parks in Denmark and in the UK as well as Skidome Xanadu in Spain also use SkiData systems.

Ticketcorner: laying the foundations for international expansion

Consolidating its ground

The economic context in the events market has not been favorable over the past financial year. In Switzerland, after a year greatly boosted by the national Expo.02 exhibition, there was a fall in the number of events, which led to reduced ticket sales.

In this context, Ticketcorner worked to consolidate and improve its positions, its technology and its business model. To that end, it completed the integration of Qivive and deployed its new TicketSoft software platform.

It also reinforced its presence in Germany thanks to the contract signed with the main Bavarian ticketing organization, Munich Ticket GmbH, which sells around 2.5 million tickets per annum. The agreement provides for the use of the TicketSoft software platform.

New pricing structure

Ticketcorner established a new pricing structure better suited to the markets in which it operates and to its expansion plans. In particular, this structure allows it to achieve a better profit margin in international markets. In Germany, this change concerns more than 5 000 partners (mostly travel agents).

In Switzerland, in early 2004, Ticketcorner also introduced a new pricing structure based on the services provided: lower charges for the handling of orders placed over the Internet or via the call center, limited reservation charges on high-priced tickets and reduced charges for the use of the platform for organizers.

On the other hand, Ticketcorner introduced a call-charge number for tickets ordered by telephone. The aim is to reduce the costs of the call center, which many customers use to obtain information about shows rather than to order tickets. The costs of this information service will now be borne by those who use it with full knowledge of it, rather than being passed on to all those who buy tickets.

TicketSoft – a simple, user-friendly reservation platform

One of Ticketcorner's principal assets lies in its ability to develop highly sophisticated reservation software systems.

The Bad Homburg Competence Center in Germany is responsible for developing new software and allows Ticketcorner to respond rapidly to customers' needs and to continuously optimize its own platform.

The TicketSoft reservation platform was developed by engineers from this center. It is now being deployed in Germany and will be launched in other markets.

TicketSoft is a software solution that allows a Ticketcorner point of sale to be set up rapidly for any organization (retail chains, supermarkets etc.) wishing to join the Ticketcorner network.

Although it does not require a dedicated infrastructure other than an Internet connection and a laser printer for issuing tickets, the TicketSoft platform does include advanced functionalities such as billing.

Consolidation of platforms

The consolidation of ticketing platforms will be one of Ticketcorner's strategic objectives for the coming year. The first significant phase in this project was the transfer of the IT hosting environment to the telecommunications specialist Swisscom IT in Bern.

These measures, which have helped to increase technological efficiency, are producing a significant reduction in costs.

Promising results from convergence projects

Ticketcorner worked intensively with SkiData over the course of the year 2003 in order to establish a structure for a coordinated approach to convergence projects.

One of the first visible results of this process is the full compatibility that has now been achieved between Ticketcorner tickets and SkiData access systems.

The harmonization of ticketing and physical access systems allows the Kudelski Group to offer organizers or operators a solution that is quick to install and very easy for visitors to use.

Among the projects that have benefited from such a platform are the Color Line Arena in Hamburg and the Olympiapark in Munich. Other large-scale projects are in the pipeline.

Multifunctional cards: a pooling of skills

Security and convenience: key concepts

With smart cards, physical access systems go well beyond the function of granting or refusing access to a person carrying a card or a badge. Smart card systems now also offer multiple functionalities and contain features such as user profiles while remaining as user-friendly as possible.

The notion of comfort is in fact becoming as important as that of security: as access controls to premises increase, the speed and the simplicity of the system as well as the possibility to benefit from personalized services (avoid queuing for example) are particularly important considerations. In fact, the user quite rightly always expects more of technology.

Kudelski's physical access control systems address two crucial issues: the issue of overall site security via people flow management systems, and the very sensitive issue of personal data protection: security of the system also involves that any transaction carried out by users, as well as their private information, must be protected.

The access control solution that NagraCard delivers for the Annual Meeting of the World Economic Forum is an example of the application of this technology in one of the most demanding contexts. The Kudelski Group is privileged to have been a strategic partner of the World Economic Forum for six years.

Destination management: a targeted application

Thanks to the pooling of the different skills at its disposal, Nagra Public Access is set to play a crucial role in the field of destination management.

Under this concept, which is designed for tourist areas, a visitor can use a single smart card to gain access to a wide range of sites and services. For example, the card serves as a ski lift pass, as a train, bus or museum entrance ticket, as a credit card and as the key to the hotel room door.

It constitutes a powerful marketing tool as it enables integrated tourist packages to be developed for a particular destination.

A pioneer of "destination management": AccessArena

Created in 2001, AccessArena provides a highly secure software platform linking together the various operators and suppliers in a given region.

In the ski resorts of the Graubunden region of Switzerland, this company deployed a secure card-based solution authorizing reservation and payment transactions over the Internet and then granting direct access to the services selected. The contactless system provide users with the advantage of, for example, avoiding queues.

Crédit Suisse offers its customers the AccessCard. The Cornèr Bank plans to integrate this technology into a limited number of cards in 2004. A cardholder will then be able, for example, to download a ski-pass onto his or her card, which will then operate not only as a credit card but also as an access card.

Tourist Data Shop

Nagra Public Access took a majority holding in Tourist Data Shop SA, based in Villars-sur-Ollon (Switzerland). This company offers a software tool that brings together under a single, comprehensive offering a wide range of services thus far scattered over many different electronic systems.

The software relies on a database that manages all tourist services of a given destination. It provides access to an on-line holiday accommodation reservation system. The user can also check vacancies over the system.

French-speaking Switzerland was the first region in the country to implement this solution which now covers 17 destinations and 60 tourist offices.

The Kudelski Group ensures the security of the system.

Solutions for communities

SportAccess continued to redefine its structures and activities. The companies belonging to the SportAccess Kudelski SA group, including subsidiaries of the Systems AG group, have been wound up and all these activities have been consolidated into SportAccess SA, based in Sion.

Following the transfer of the ski sector to SkiData, SportAccess is concentrating on the development and marketing of multifunctional card systems (MultiSpAK) directed at communities such as corporations, hospitals and universities.

The company also manages access control projects for events such as the Montreux Jazz Festival and the World Information Summit in Geneva.

Spotlight on synergy: the Montreux Jazz Festival

The longstanding relationship between the Kudelski Group and the Montreux Jazz Festival started with the use of Nagra recorders which have actively contributed to the creation of the Festival's legendary archives. Once again Nagra played an important role in 2003, as it recorded the Piano Competition from which a CD was produced.

However, for the third consecutive year, the Kudelski Group's contribution went beyond the confines of art.

In 2003, the combined skills of SportAccess and SkiData within Nagra Public Access resulted in the production of a VIP badge management solution especially designed for the Festival. In addition to access control functions, the system included electronic purse functionality allowing payment at the VIP bars, thanks to customized cash desks.

Used by the Festival's privileged visitors, the elegant, simple and effective badge system contributed to the prestige image of the event and supported the sponsors communication efforts. It thereby won the approval of the Festival organizers.

Ticketcorner carried out the ticketing, as it does every year.

Year after year, the Kudelski Group and the Montreux Jazz Festival are working closer together, sharing their know-how and passion. Each year's event gives the Kudelski Group an opportunity to provide new technologies and showcase the evolution towards convergence in a spectacular and user-friendly way.

Smart card provided by Kudelski for the 2003 edition of the Montreux Jazz Festival.

Nagra Audio

A legendary brand in the digital era

Nagra Audio
A legendary brand in the digital era

Few names in the world of professional audio enjoy prestige on a par with that of Nagra.

Spanning more than half a century, the story of the brand has been punctuated with inventions and developments that have revolutionized the history of sound recording.

In 1951, Stefan Kudelski developed the first independent, portable recorder, the Nagra I. This machine went down in history as it introduced a concept that had remained unattainable until that moment: freedom of movement. For the world of radio and television and for the cinema and recording industry in particular, this was a giant step forward, and one that opened up extraordinary horizons.

The invention was all the more spectacular in that it came with a very high quality of sound reproduction. In this regard, Nagra recorders surpassed many large stationary installations. Furthermore, they were exceptionally robust.

Different generations of equipment succeeded one another, continuously developing the qualities upon which the brand's success had been built. Nor was this triumph limited to the ranks of reporters and sound engineers.

Scientists, explorers, ethnologists, musicologists and other enthusiastic sound recordists traveled to the remotest corners of the planet, their Nagra machines slung across their shoulders, collecting records that were often of exceptional value.

More than any other machine, the Nagra recorder contributed to the establishment of the world's sound archives.

In the era of digital convergence

As in every sector of the electronics industry, digital is setting the pace for audio. The current generation of Nagra recorders has seen magnetic tapes replaced by a detachable hard disk or, in its most miniature versions, by compact memory cards similar to those used in photography.

Equipment is evolving in increasingly computerized environments and is now compatible with any computer: convergence is also breaking down barriers in this field.

Alongside this development, we are seeing a reduction in the gap between equipment in the professional world and that intended for the general public, the quality of which increases year by year.

In the light of all this, it is only exceptional qualities that can still make a difference. This is precisely the area in which Nagra has always excelled. Engineering without compromise, perfect ergonomics that go beyond the whims of fashion, equipment that evolves and unfailing robustness: these traditional values represent the guarantee of success now more than ever.

Nagra Ares-PII

Nagra V

Nagra DAC

Nagra VPA

A year of consolidation

For Nagra Audio, 2003 was above all a year of consolidation. The division put the finishing touches to the restructuring begun in 2002. The reorganization of marketing/sales, research and development, quality control and after-sales service was successfully completed. By improving coordination, the new organization has gained in efficiency and dynamism.

The reconfiguration of the distribution network is also well underway. Nagra Audio has retained its subsidiaries in a limited number of markets (France, UK, and USA), but elsewhere it has preferred to outsource the direct marketing of its equipment to local agents with good connections in their particular markets.

Most Nagra Audio sales are generated in export markets. 60% of the most profitable of these markets are in the European Union countries. Asia, North America and the Middle East account for the rest of its sales.

The professional sector: development of the product range

In 2003, Nagra Audio concentrated upon the development of two of the flagship products in its range.

A latest generation miniature recorder, the Ares PII, has succeeded the Ares P and RCX 220 models. Intended principally for reporters, this digital equipment records data in FAT 16 format on its memory card, making it fully compatible with all PCs and Macintosh computers.

The recorder can also function in linear mode allowing access to very high quality recordings; something that equipment from the previous generation did not permit, as it functioned purely in compressed mode.

New hardware and software developments have also been applied to the Nagra V recorder, which was launched in 2002. This equipment is modular and was designed so that it could evolve in line with technological advances. While it initially used magnetic disks as its recording medium, it now accepts a 2.5" miniature hard disk for the storage of sound data.

This hard disk is of the same type as those used for computers; housed in a detachable cassette, it has many advantages: high storage capacity (dozens of hours of recording time), exceptional reliability, robustness, time savings, low cost etc.

The Nagra V is particularly valued in the world of cinema and television, where it is often used for outdoor sound recordings, which are generally made under difficult and restrictive conditions.

A successful overture to the audiophile market

Nagra has always fascinated audiophiles. Since 1997, the business has devoted particular attention to this market, designing a specific range of exceptionally high quality Hi-Fi equipment: PL-L and PL-P pre-amplifiers, VPA tube amplifiers and MPA transistor amplifiers, DAC converters and the SNST-R miniature recorder.

This equipment (particularly the VPA tube amplifier) is achieving international success and is regarded by the specialist press as flagship equipment.

First announced in 2002 and then launched in June 2003, the Nagra DAC is a digital/analog converter that allows the most sophisticated audiophiles to gain a whole new experience from listening to their CDs.

The brand plans to extend its array of products over the coming years with an additional Hi-Fi range to be launched at attractive prices.

Further international distinction

Nagra has certainly won the largest ever number of awards in the history of audio, including three Oscars and an Emmy Award.

In 2003, the Nagra V received a Satisfecit Award at the Satis exhibition in Paris for the innovative nature of the recorder.

Corporate governance

Note concerning corporate governance

This report has been prepared in conformity with the Directive on Information Relating to Corporate Governance issued by the SWX Swiss Exchange, which entered into force on July 1, 2002. Unless otherwise mentioned, the information given in this report reflects the situation as at 31.12.2003.

1. Group structure and shareholders

1.1 Group structure

Kudelski SA is registered in Cheseaux-sur-Lausanne.

The company has been structured as a holding company since 1999 and its shares have been listed on the SMI (Swiss Market Index) since 2000.

From an operational point of view, the activities of the Group are divided into two sectors: digital television and public access.

The Kudelski Group is organized and managed as shown on the organization chart on the following page. The shareholdings in the digital television sector are held directly by Kudelski SA, while the principal shareholdings in the public access sector are held by Nagra Public Access AG, which in turn is fully owned by Kudelski SA.

1.1.1 Operational structure of the Group

Pleass refer to the organization chart on the following page.

1.1.2 Listed companies included in the scope of consolidation

Kudelski SA, which is headquartered in Cheseaux-sur-Lausanne, Switzerland, is a Swiss holding company listed on the Swiss Exchange (val No 001226836/ISIN CH0012268360) with a market capitalization at 31.12.2003 of CHF 1 914 432 636. Only Kudelski SA bearer shares are traded on the SWX Swiss Exchange.

With the exception of Kudelski SA, the companies included in the scope of consolidation are not listed.

1.1.3 Unlisted companies included in the scope of consolidation

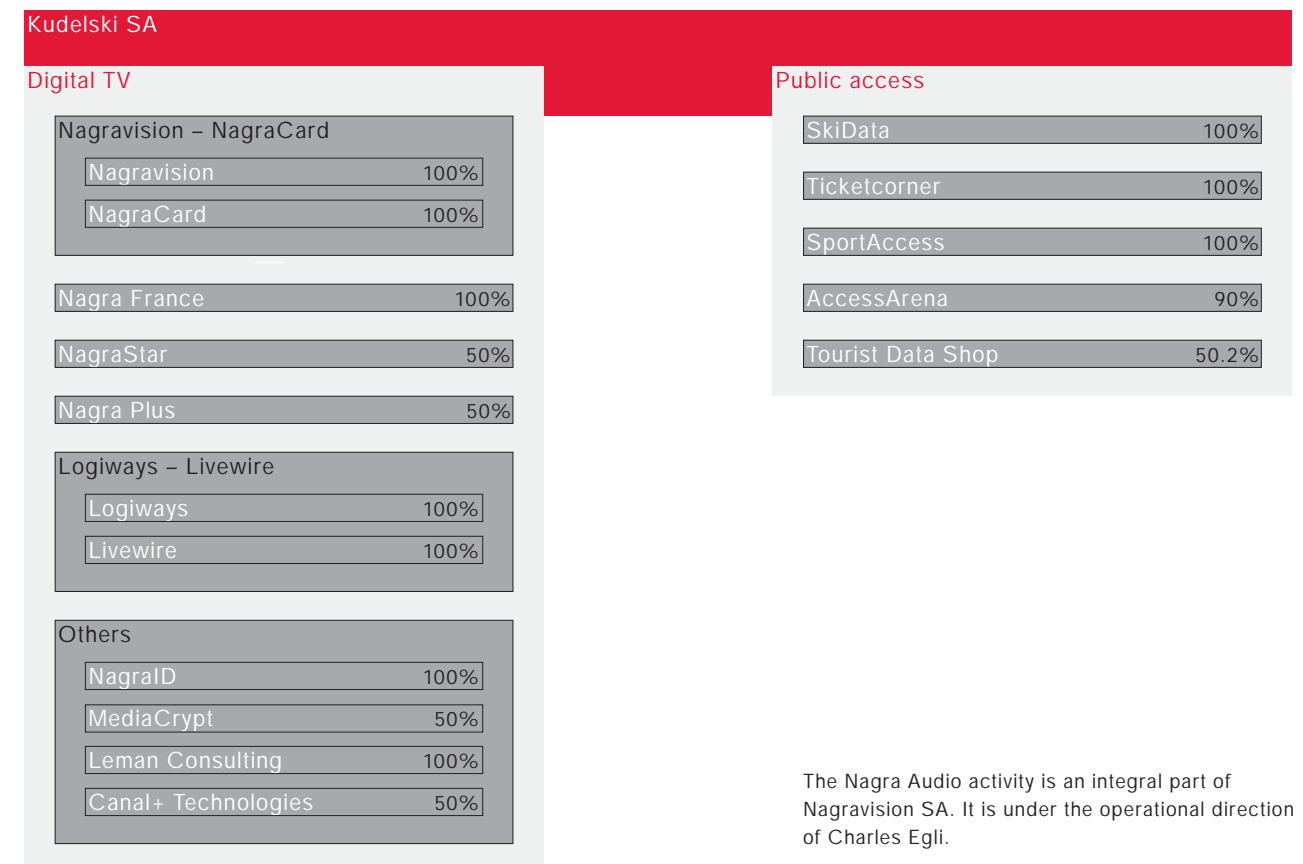Please refer to the financial reports.

1.2 Significant shareholders

The principal shareholder of Kudelski SA is the Kudelski family. No other shareholder holds more than 5% of the capital and there are no shareholders' agreements.

Kudelski family	31.12.03
Listed bearer shares	12 941 095
Unlisted registered shares	46 300 000
Voting rights	63,59%
Share capital held	34,12%

1.3 Cross-shareholdings

There are no cross-shareholdings.

Kudelski SA

Digital TV

Nagravision – NagraCard
| Nagravision | 100% |
| NagraCard | 100% |

Nagra France	100%
NagraStar	50%
Nagra Plus	50%

Logiways – Livewire
| Logiways | 100% |
| Livewire | 100% |

Others
NagraID	100%
MediaCrypt	50%
Leman Consulting	100%
Canal+ Technologies	50%

Public access

SkiData	100%
Ticketcorner	100%
SportAccess	100%
AccessArena	90%
Tourist Data Shop	50.2%

The Nagra Audio activity is an integral part of Nagravision SA. It is under the operational direction of Charles Egli.

International presence

		Digital TV	Public access	Nagra Audio
Europe	Switzerland	■	■ ●	■
	Austria		■	
	Spain	▲		
	France	■	▲	▲
	Germany	▲	▲	▲
	Italy		▲	
	The Netherlands		▲	
	Sweden		▲	
	United Kingdom, Rep. of Ireland	▲		▲
America	USA	■ ●	▲	●
	Brazil	▲		
Asia	Singapore	●		
	China	▲		

■ head office ● regional headquarters ▲ office

2. Capital structure

2.1 Amount of the ordinary, authorized and conditional capital
2.2 Authorized and conditional capital in particular

Ordinary capital

The share capital amounts to CHF 514 949 360. It is divided into 46 864 936 bearer shares with a nominal value of CHF 10 and 46 300 000 registered shares with a nominal value of CHF 1. Each share confers the right to one vote. All the shares are fully paid-up.

Authorized capital

The Board of Directors is authorized to increase the share capital in one or more stages, until May 24, 2004, by a maximum total of CHF 40 881 640 through the issue of 3 768 164 bearer shares with a nominal value of CHF 10 and of 3 200 000 registered shares with a nominal value of CHF 1, to be fully paid-up.

The subscription rights of shareholders may be excluded and allotted to third parties by the Board of Directors with a view to acquiring corporations or parts of corporations or in order to finance the whole or partial acquisition of other companies in Switzerland or elsewhere.

Conditional capital

Kudelski SA has conditional capital which exists in two forms.

The first is a maximum total of CHF 8 988 200 through the issue of a maximum of 898 820 bearer shares with a nominal value of CHF 10, to be fully paid-up, as and when the option rights which are or will be granted to employees of the company and of affiliated companies are exercised.

The second is a maximum total of CHF 60 000 000 through the issue of a maximum of 6 000 000 bearer shares with a nominal value of CHF 10, to be fully paid-up, as and when the conversion rights linked to bonds with warrants of the company or its subsidiaries are exercised. Preferential subscription rights for its shareholders are excluded.

2.3 Changes of capital over the last three financial years

in kCHF	31.12.03	31.12.02	31.12.01
Registered share capital	46 300	46 300	46 300
Bearer share capital	468 649	467 299	466 641
Legal reserve	59 380	57 719	53 589
Net profit	2 732	25 055	82 574
Total available earnings	162 036	160 965	140 040
Total shareholders' equity	736 365	732 283	706 570

Information relating to changes in capital taking place in 2003, 2002 and 2001 are shown in the Group's corresponding financial statements.

2.4 Shares and participation certificates

The capital of Kudelski SA on December 31, 2003 was made up of 46 300 000 registered shares and 46 864 936 bearer shares. Each share confers the right to one vote at the General Meeting and to a dividend proportional to the nominal value of the share of whatever kind. The company did not pay any dividend in 2003.

2.5 Profit sharing certificates

Kudelski SA does not have profit sharing certificates.

2.6 Limitations on transferability and nominees registration

Under Article 9 of the Articles of Incorporation of Kudelski SA, the registered shares may be transferred by presentation of the endorsed stock and is subject to the approval of the Board of Directors. The latter may refuse to approve the transfer of registered shares in one or other of the following cases:

a) If there exists good cause within the meaning of Article 685 b (2) of the Swiss Code of Obligations, i.e. if admission of the acquirer of the stocks into the shareholder group is incompatible with the object of the company or is capable of compromising the economic independence of the company. This would in particular be the case if the acquirer is capable of prejudicing the company directly or indirectly and if transfer of the stock could jeopardize the existing majorities.

b) If the company makes an offer to the vendor to take over the shares for its own account, for the account of other shareholders or of third parties at their actual value at the time of the request.

c) If the acquirer has not expressly declared that he was taking over the shares on his own behalf and for his own account.

If the shares were acquired by right of succession, estate distribution, prenuptial settlement or judicial execution proceedings, the company may only refuse consent if it offers to take over the shares from the acquirer at their actual value.

In the case of dispute, the actual value provided for under this Article will be determined by the courts of the domicile of the company. The company will bear the costs of valuation.

If the acquirer does not reject the purchase offer within one month of becoming aware of the actual value, the offer will be deemed accepted.

Kudelski SA has no regulations concerning nominee registration.

2.7 Convertible bonds and options

At the end of January 2002, Kudelski Financial Services Holding S.C.A., a 100% subsidiary of Kudelski SA, issued an unsubordinated convertible bond of USD 325 million. The conversion price was fixed at CHF 127.50 per ordinary bearer share of Kudelski SA and was changed on July 31, 2003 to CHF 100 in conformity with the provisions of the bond public offering prospectus. Kudelski SA guarantees this issuance unconditionally and irrevocably.

The annual coupon is 2.25% calculated on the nominal amount of the bonds and payable semi-annually (on January 31 and July 31) from July 31, 2002.

At the January 31st, 2009 maturity date, the issuer will redeem the bonds at 105.79% of their nominal amount. Bonds may be redeemed at any time after January 31, 2005 and before January 31, 2007.

The convertible bond is listed on the Luxembourg stock exchange under reference number ISIN XS0140968842.

During the 2002 and 2003 financial years, a bond repurchase operation was conducted on the market. By December 31, 2003, the Kudelski SA Group had repurchased USD 152.072 million in nominal value. These bonds have been cancelled. Following this operation, the nominal amount of bonds in circulation on December 31, 2003 stood at USD 172.928 million.

3. Board of Directors

The Board of Directors is the highest decision-making body within the company and is responsible for monitoring the decisions taken at management level. Today it is made up of 7 members elected by the General Meeting of shareholders.

The Board of Directors has an Audit Committee, a Strategy Committee and a Remuneration Committee.

Membership is as follows:

André Kudelski
Chairman of the Board and Chief Executive Officer (CEO)

Claude Smadja
Deputy Chairman of the Board of Directors

Norbert Bucher

Laurent Dassault

Patrick Fœtisch

Stefan Kudelski

Gérard Limat

Corporate Secretary to the Board

Adrienne Corboud Fumagalli
Corporate Secretary until 14 January 2004

Nicolas Gœtschmann
Corporate Secretary from 15 January 2004

3.1 Members of the Board of Directors
3.2 Other activities and vested interests
3.3 Cross-involvement

These points are addressed in the individual CVs of the members provided on the following pages.

3.4 Elections and terms of office

The members of the Board are appointed by the General Meeting for a term of one year. They may be re-elected. The term of office ends on the day of the Ordinary General Meeting.

The Board of Directors establishes itself by appointing a Chairman and a Deputy Chairman.

The secretary may be chosen from outside the Board of Directors. He or she is not a member of the Board.

Ms Adrienne Corboud Fumagalli, Corporate Secretary of the Kudelski Group, occupied this post from December 14, 2000 to January 14, 2004. Mr. Nicolas Goetschmann took over the post on January 15, 2004.

3.5 Internal organizational structure

3.5.1 Allocation of tasks within the Board of Directors

With the support of its three Committees, the Board of Directors exercises inalienable and non-transferable functions established by the law (Art. 716 CO).

The Chairman is delegated responsibility for conducting discussion at the General Meeting, the minutes and the conduct of meetings of the Board, the task of informing the members of the Board of the development of business and the biannual accounts as well as representation of the company in respect of administrative and judicial authorities.

The Board of Directors today is made up of seven members, six of whom are non-executive. It meets at least four times a year, but as often as the good conduct of business requires.

In the absence of contrary provision of law, management of the company is delegated to the Chief Executive Officer (CEO).

In his management activities, the CEO acts on the basis of directives issued by the Board of Directors and safeguards the interests of the company.

He presents the accounts of the company to the members of the Board of Directors every six months. He also presents a report covering the substantive aspects of business development.

	Year of birth	Position on the Board	Nationality	Executive/ Non-executive	1st election to the Board
André Kudelski	1960	Chairman and Chief Executive Officer	Swiss	Executive	1987
Claude Smadja	1945	Deputy Chairman	Swiss	Non-executive	1999
Norbert Bucher	1931	Member	Swiss	Non-executive	1992
Laurent Dassault	1953	Member	French	Non-executive	1995
Patrick Fœtisch	1933	Member	Swiss	Non-executive	1992
Stefan Kudelski	1929	Member	Swiss	Non-executive	1968
Gérard Limat	1940	Member	Swiss	Non-executive	1995

3.5.2 Members list, tasks and area of responsibility for each Committee

Each Committee is governed by a chart defining its purpose, its obligations and its composition. The Committees of the Board also meet as often as is necessary and report regularly to the Chairman of the Board of Directors.

Remuneration Committee

The Remuneration Committee oversees the remuneration policy put in place by the company. It likewise examines, together with the Chairman of the Board of Directors, the remuneration of the members of the Board of Directors and of the top management of the company.

This Committee may consult outside experts in the preparation of its recommendations and decisions.

It is composed of at least two non-executive members of the Board of Directors.

Audit Committee

The Audit Committee provides effective and regular supervision for the financial reporting processes of the company in order to satisfy itself of their integrity, transparency and quality. It ensures the conformity of the accounting methods with the applicable regulations on the subject and also sees to the constant updating and provision of financial information to the company.

This Committee supervises the internal reporting processes and the work of the external auditors. It ensures that the recommendations of the latter are followed up and safeguards their independence.

It supplies regular recommendations and reports to the Board of Directors on the adequacy, efficacy and truthfulness of the accounting processes.

The Audit Committee meets four times a year in principle. It reports to the Board of Directors on its activities. The Committee may call on independent experts and consultants as it deems fit in the accomplishment of its tasks.

The Committee is made up of at least three members who are non-executive members of the Board of Directors. At least one of the members of the Committee is to have proven experience in the field of accounting. All the members must have knowledge or practical experience in financial management. The members are appointed by the Board of Directors.

Strategy Committee

The task of this Committee is to constantly review and define the strategy of the Group. It drafts strategic development options with the goal of ensuring the long-term enhancement of the competitive position of the Group and its shareholder value.

To this end the Strategy Committee monitors the development of the markets and the competitive position of the Group, drafts future development models and safeguards the development of the Group by means of investments, disinvestments and reorganization.

The Strategy Committee is made up of three members of the Board of Directors, including the Chairman and Deputy Chairman. It meets at least twice a year.

The Committees of the Board of Directors:

	Audit Committee	Strategy Committee	Remuneration Committee
André Kudelski		■	
Claude Smadja	■	●	
Norbert Bucher	●		
Patrick Fœtisch			■
Gérard Limat	●	●	●

■ Chairman
● Member

3.5.3 Work methods of the Board of Directors and its Committees

In 2003, the Board and its Committees met as follows:

Board of Directors	7 times
Strategy Committee	3 times
Audit Committee	4 times
Remuneration Committee	4 times

The average attendance at the Board meetings, excluding absences for health reasons, was more than 90%. The Board reserved one full day to the discussion of strategic questions. With the exception of this one-day meeting, most meetings lasted between 3 and 4 hours.

3.6 Definition of areas of responsibility

The Board of Directors has delegated co-ordination of the day-to-day operations of the Group companies to the Chief Executive Officer. The internal organizational structure and the definition of the fields of responsibility of the Board of Directors and the Committees of the Board are established in the By-laws. This document is available on request from the General Secretariat of the Kudelski Group.

3.7 Information and control instrument vis-a-vis the Group management

The Oracle E-Business Suite system implemented in 2002 is operational and, in 2003, allowed income and costs to be allocated to project accounting for the Cheseaux-based companies. The system was optimized further during 2003, with new functionalities being introduced.

Kudelski SA also adopted new budget processes to align them with the project portfolio management. This enhances transparency at client and project level in financial planning, budgeting and management.
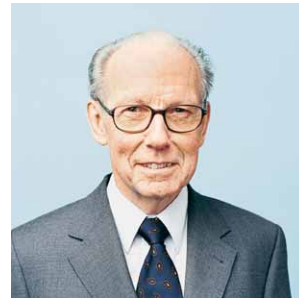
New controlling processes were implemented, including a standardized system for reporting by unit, reports by cost center and an optimized account receivables management process.

André Kudelski

Claude Smadja

Norbert Bucher

Laurent Dassault

Patrick Fœtisch

Stefan Kudelski

Gérard Limat

Board of Directors

André Kudelski

André Kudelski obtained a degree in physical engineering from the Ecole Polytechnique Fédérale de Lausanne (Swiss Federal Institute of Technology) in 1984. He then held the position of R&D Engineer at Kudelski SA and in Silicon Valley, before becoming Pay TV Product Manager and then Director of Nagravision, Kudelski SA's pay TV division. In 1991, André Kudelski succeeded his father Stefan Kudelski to the post of President and CEO of Kudelski SA. He has been a member of Kudelski SA's Board of Directors since 1987.

André Kudelski sits on the Board of the Edipresse Group, of Nestlé, of Swiss International Airlines and of Dassault Systèmes (France), among others. In addition, he is a member of the Advisory Board of Crédit Suisse, of the Swiss American Chamber of Commerce and of the Board of economiesuisse. He is also a member of the Lutry district council in Switzerland.

André Kudelski presides over the Board's Strategy Committee.

He also holds positions on the Board of a number of companies in the Kudelski Group: Nagravision (CEO), NagraCard (CEO), Nagra Plus (President and CEO) and MediaCrypt (President).

André Kudelski is also a member of the Supervisory Board of SkiData.

Claude Smadja

Claude Smadja is a politics graduate from the University of Lausanne. After a number of years as Deputy Editor of the Information Department at Télévision Suisse Romande (TSR), the TV channel for French-speaking Switzerland, in 1987 he joined the management of the World Economic Forum, a post that he was to hold until 1992. He then returned to TSR as Information Director until 1996, when he was appointed Managing Director of the World Economic Forum. In 2001, Claude Smadja set up his own strategy consultancy, Smadja & Associates, Strategic Advisory.

Claude Smadja sits on the Board of the Edipresse Group, of Infotech and of Infosys, where he also holds the post of Chairman of the Nomination Committee. In addition, he is a member of the International Board of Overseers of the Illinois Institute of Technology and President of the International Advisory Board of Dubai International Finance Center.

Claude Smadja is Deputy Chairman of the Board of Kudelski SA and lead director within the meaning of the "Swiss Code of Good Practice in Corporate Governance" issued by economiesuisse.

He is also Chairman of the Audit Committee and a member of the Strategy Committee of the Kudelski SA Board of Directors.

Norbert Bucher

Norbert Bucher obtained a doctorate in technical sciences at the Ecole Polytechnique Fédérale de Lausanne (Swiss Federal Institute of Technology). He also studied on postgraduate management programs at the New York University, at the Harvard Business School in Boston and at the IMEDE (IMD Lausanne).

Norbert Bucher began his professional career with Sulzer, in Winterthur and New York, then continuing it at Syska & Hennessy Inc, Consulting Engineers in New York. He then joined Philip Morris Europe SA as Deputy Director. After eleven years as Deputy Managing Director at Interfood SA in Lausanne, he held the post of Senior Vice President of Jacobs Suchard in Zurich for seven years.

A member of the Kudelski SA Board of Directors since 1992, he is also a member of the Board's Audit Committee.

Norbert Bucher is also a member of the Board of Nagra Plus and Chairman of the Board of Directors of Ticketcorner.

Laurent Dassault

A business law graduate, Laurent Dassault also holds a degree from the Paris ESLSCA (School of Applied Commercial Sciences). In 1977, he began his career at Banque Vernes and at Banque Industrielle et Commerciale du Marais, taking over Banque Parisienne Internationale with Paribas in 1990.

In 1992, he joined Groupe Industriel Marcel Dassault (GIMD), where he now holds important positions within its various French and foreign structures.

Thus he is Chairman and Managing Director of Dassault Belgique Aviation, Managing Director of Immobilière Dassault SA and a member of the board of GIMD, SVE, Dassault Systèmes, SOGITEC Industries SA, IPS (Industrial Procurement Services) and APRO (Aero Precision Repair and Overhaul Company). He is also Chairman of Midway Aircraft.

Laurent Dassault sits on the Board of Terramaris SA in Fribourg, Switzerland, and of the Power Corporation in Montreal, Canada.

He is also a member of the Advisory Board of Syntek Capital SA in Pullach, Germany, and of the Advisory Committee of Sagard PEP in Paris.

Patrick Fœtisch

Patrick Fœtisch graduated from the University of Lausanne as a doctor of law.

He manages his own law office.

He sits on the Board of Directors of Renault Finance SA, Lausanne and of Renault Holding AG, Zug.

A member of the Kudelski SA Board of Directors since 1992, he is also Chairman of the Board's Remuneration Committee.

Patrick Fœtisch acts as legal counsel to the Group as and when required.

He holds positions on the Board of a number of companies in the Kudelski Group: Nagravision (President), NagraCard (President), Nagra Plus (member of the Board), NagraID (President), Lysis Trading (President), Logiways (President), Nagra-Futuris (member of the Board), Livewire (President), Tourist Data Shop (member of the Board) and SportAccess (member of the Board).

He is also a member of the Supervisory Board of SkiData.

Stefan Kudelski

Stefan Kudelski studied at Florimont (Geneva). Self-taught in electronics, from 1948 he studied to be a physical engineer at the Ecole Polytechnique Fédérale de Lausanne (EPFL – Swiss Federal Institute of Technology).

In 1951, he created the Kudelski firm with the first NAGRA, a self-contained tape recorder designed for radio reporters. Within a few years, having expanded into new, enhanced models, the Nagra range became the standard tool of the cinema and television industry.

In 1991, a project for diversification into the field of encryption for pay TV provided the firm with a new direction. At this point, Stefan Kudelski handed over the reins of management to his son, André Kudelski.

Stefan Kudelski has received many awards during his career: Academy Awards (Oscars) in 1965, 1977, 1978 and 1983, two Emmy Awards and Gold Medals from L. Warner, AES (Audio Engineering Society), Lyra and Eurotechnica.

He is also an honorary member of AES, of SMPTE (Society of Motion Picture Television Engineers), of BKSTS (British Kinematograph Sound and Television Society), of SVIA (Schweizerischer Verein für Informatik in der Ausbildung), of IEEE (Institute of Electrical and Electronics Engineers) and of AMPS (Association of Motion Picture Sound). In addition, he possesses an honorary doctorate from EPFL.

Gérard Limat

Gérard Limat studied accountancy and has worked within the Dassault Group since 1968. He is currently manager of Terramaris International SA in Meinier-Genève (a company belonging to the Dassault Group).

He is also Chairman of the Board of Directors of Société Financière Terramaris SA in Fribourg, of Sita SA in Fribourg and of Dasnair SA in Meinier-Genève.

In addition, he sits on the Board of Cendres et Métaux in Bienne, of Société d'Exploitation du Stade de Genève in Geneva and of Olympic Tools Hellas in Greece.

Appointed to the Kudelski SA Board of Directors in 1995, he is a member of the three Committees within the Board, namely the Audit, Strategy and Remuneration Committees.

Gérard Limat is also a member of the Board of Ticketcorner, Nagra Public Access and SportAccess.

4. Group management

4.1 Group executive management members
4.2 Other activities and vested interests

This information is provided in the individual CVs of the members of the Group management on the following pages. It reflects the situation on March 31, 2004, the date on which the annual report went to press.

On January 15, 2004, the date on which nominations were announced, the Group management was made up of the following persons:

André Kudelski
Chairman and Chief Executive Officer (CEO)

Pierre Roy
Executive Vice President
Chief Operating Officer (COO), Digital TV

Charles Egli
Executive Vice President
Chief Executive Officer (CEO), Nagra Public Access

Alan Guggenheim
Executive Vice President
Chief Executive Officer (CEO) of NagraStar

Mauro Saladini
Executive Vice President
Chief Financial Officer (CFO) of the Group

Adrienne Corboud Fumagalli
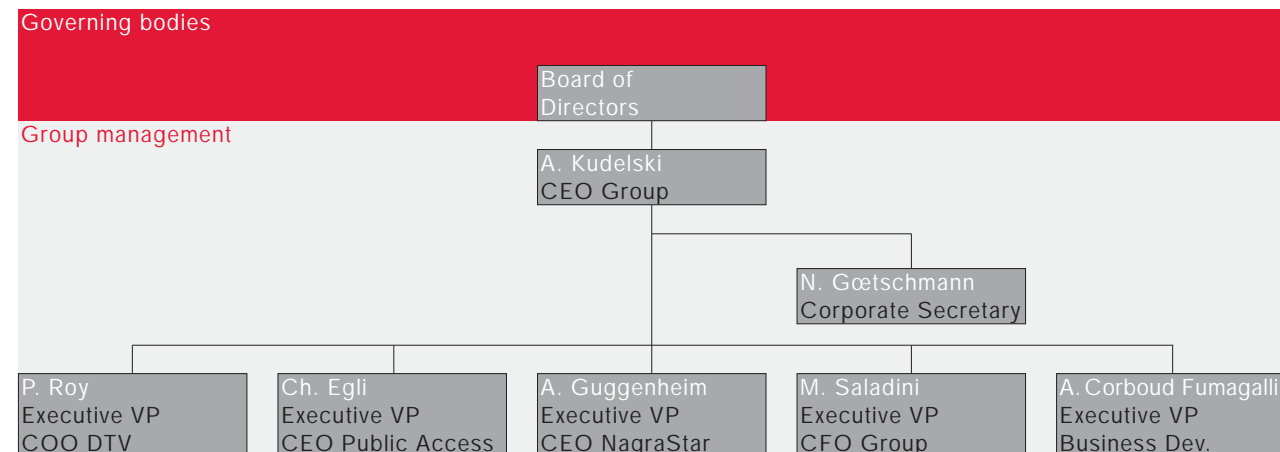Executive Vice President Business Development

Nicolas Gœtschmann
Corporate Secretary, Director of Group Administration

On 31 December 2003, Adrienne Corboud Fumagalli was Corporate Secretary to the Group and Nicolas Gœtschmann was Senior Vice President of Finance, Nagravision/NagraCard and of Group Administration. Other members of the Group management held the same positions as indicated above.

4.3 Management contracts

There were no management contracts in place at Kudelski SA on December 31, 2003.

From left to right: Alan Guggenheim, Charles Egli, Pierre Roy, André Kudelski, Mauro Saladini, Nicolas Gœtschmann, Adrienne Corboud Fumagalli

Governing bodies

Board of Directors

Group management

A. Kudelski
CEO Group

N. Gœtschmann
Corporate Secretary

P. Roy	Ch. Egli	A. Guggenheim	M. Saladini	A. Corboud Fumagalli
Executive VP	Executive VP	Executive VP	Executive VP	Executive VP
COO DTV	CEO Public Access	CEO NagraStar	CFO Group	Business Dev.

André Kudelski (1960)
Chairman and Chief Executive Officer (CEO)
Swiss nationality

André Kudelski obtained a degree in physical engineering from the Ecole Polytechnique Fédérale de Lausanne (Swiss Federal Institute of Technology) in 1984. He then held the position of R&D Engineer at Kudelski SA and in Silicon Valley, before becoming Pay TV Product Manager and then Director of Nagravision, Kudelski SA's pay TV division. In 1991, André Kudelski succeeded his father Stefan Kudelski to the post of President and CEO of Kudelski SA. He has been a member of Kudelski SA's Board of Directors since 1987.

André Kudelski sits on the Board of the Edipresse Group, of Nestlé, of Swiss International Airlines and of Dassault Systèmes (France), among others. In addition, he is a member of the Advisory Board of Crédit Suisse, of the Swiss American Chamber of Commerce and of the Board of economiesuisse. He is also a member of the Lutry district council in Switzerland.

André Kudelski presides over the Board's Strategy Committee.

He also holds positions on the Board of a number of companies in the Kudelski Group: Nagravision (CEO), NagraCard (CEO), Nagra Plus (President and CEO) and MediaCrypt (President).

André Kudelski is also a member of the Supervisory Board of SkiData.

Pierre Roy (1952)
Executive Vice President, Chief Operating Officer (COO)
Digital TV
Swiss nationality

After obtaining a degree in business management from HEC, the business administration school of the University of Lausanne in 1975, Pierre Roy began his professional career as a financial analyst with Procter & Gamble. Building on this initial experience, in 1977 he joined IBM as a commercial engineer. In 1979, he began his international career with Digital Equipment Corporation, where he held various management positions both within the European center in Geneva as well as abroad in the finance & administration and marketing & business management departments.

In 1992 he joined Kudelski SA as Managing Director Nagra Audio, Business Development Director Nagravision and Managing Director of Précel SA (then a Kudelski Group company).

Since 1999, he has managed his own business consultancy company and has worked in the telecommunications sector while continuing to contribute to strategic projects for Nagravision. On January 17, 2003 he was appointed COO for the Digital TV entity of the Kudelski Group and Executive VP.

Pierre Roy is a member of the Board of Nagravision, NagraCard, Logiways and Livewire.

Charles Egli (1948)
Executive Vice President, Chief Executive Officer (CEO)
Nagra Public Access
Swiss nationality

Charles Egli has a degree in electronic engineering from the technical college ETS. He worked at Studer Revox in Zurich as an R&D engineer and then as a project manager until 1989, the year in which he joined Nagravision as project manager. He was appointed Chief Operating Officer of Kudelski SA in 1992, then on January 17, 2003 CEO of Nagra Public Access and Executive VP.

Charles Egli holds positions on the Board of a number of companies in the Kudelski Group: Nagravision (member of the Board), NagraCard (member of the Board), NagraID (member of the Board), Nagra-Futuris (member of the Board), Ticketcorner (Deputy Chairman), SportAccess (Deputy Chairman), SkiData (Schweiz) (President), AccessArena (President) and Tourist Data Shop (member of the Board).

Alan Guggenheim (1950)
Executive Vice President, Chief Executive Officer (CEO)
NagraStar
French nationality – American nationality since 1991

Alan Guggenheim is an engineering graduate from the ESTP (France) and a graduate of the French Command and General Staff Reserve College. After serving as an engineer for Société Routière Colas in Paris and in the Antilles from 1976 to 1978, he was appointed Executive Director of Conseil Régional du Patronat de la Guadeloupe (local representative of the CNPF and the CGPME). Until 1981 he was a member of the Board of several organizations (Social Security, Retirement, Unemployment Compensation).

Having moved to California, he founded San Joaquin Software Systems, then CIS, Inc., of which he has been Chairman and CEO since 1986, representing and developing the activities of the Dassault Group in the United States in the field of communication, banking and multimedia from 1993 to 1998, and those of Nagravision since 1996. Alan Guggenheim was a Board member of SUCMANU in Paris between 1982 and 1986 and a founding member of the Board of the Pacific State Bank in Stockton, CA, from 1985 until 1987.

Since 2000, Alan Guggenheim has been CEO of NagraStar, a company owned equally by the Kudelski Group and EchoStar. He was appointed Executive VP of the Kudelski Group in January 2003.

Mauro Saladini (1966)
Executive Vice President, Chief Financial Officer (CFO)
of the Group
Swiss nationality

Mauro Saladini possesses a degree in electrical engineering from the ETHZ (Swiss Federal Institute of Technology Zurich) as well as an MBA from INSEAD, Fontainebleau, France.

After five years as a financial services consultant for Accenture, he joined Thema Consulting. He set up that company's Zurich branch and managed its activities in the cash flow and risk management sectors. In 1997 he joined McKinsey & Co., where he became a partner in 2001. A major part of his work focused on corporate finance and strategy projects involving various industries, in particular media and telecommunications. In addition, he was in charge of the Swiss Media Practice and joint head of the European Media Practice.

He joined the Kudelski Group as CFO and Executive VP early 2003. He is ad interim Chairman of the Supervisory Board of SkiData.

Adrienne Corboud Fumagalli (1958)
Executive Vice President Business Development
since January 15, 2004
Corporate Secretary to the Group until January 14, 2004
Swiss nationality, Italian nationality since 1993

A doctor of economics and social sciences and graduate of the University of Fribourg, Adrienne Corboud Fumagalli has for several years been a researcher, lecturer and consultant in the field of media and information technology policies for various institutions (University of Fribourg, DAMS Bologna, CNRS Paris and McGill University, Montreal). Between 1997 and 2000, she held various positions with Swisscom in Bern, notably as Business Development Manager and then Marketing Director. She joined the Kudelski Group as Corporate Secretary in November 2000. In January 2004, she was appointed Executive VP in charge of Business Development.

Adrienne Corboud Fumagalli is a member of the Board of a number of companies in the Kudelski Group: NagraID, Nagra-Futuris, Livewire, AccessArena and Lysis Trading.

Nicolas Gœtschmann (1960)
Corporate Secretary to the Group, Director of Administration
since January 15, 2004
Senior VP Finance Nagravision/NagraCard and of
Group Administration, until January 14, 2004
Swiss nationality

Nicolas Gœtschmann is an economics graduate from the University of Fribourg. Between 1986 and 1989 he held the position of Private Client Executive for Crédit Suisse in Geneva, before becoming a Fund Manager for Kestrel SA in Neuchâtel. In 1990 he joined the Kudelski Group as Director of Finance and Administration. At the beginning of 2004 he became Corporate Secretary to the Kudelski Group while still Director of Group Administration.

Nicolas Gœtschmann is a member of the Board of various companies in the Kudelski Group: Nagra Trading, Logiways and Leman Consulting.

5. Compensations, shareholdings and loans

5.1 Content and method of determining the compensation and shareholding programmes

The Remuneration Committee controls and approves the remuneration policy established by the company. It also has responsibility for determining the remunerations of members of the Board of Directors as well as the members of Group management.

Members of the Board of Directors

The global remuneration of non-executive members of the Board of Directors includes fixed annual fees as well as an allowance for the costs and other expenses incurred in connection with the performance of their duties. This remuneration is given in cash. A variable element is also allocated in options.

For the specific portfolios allocated to members of the Board of Directors of Kudelski SA or of one of the companies in the Group, the services rendered are remunerated on the basis of fees, with the amount of the benefits corresponding to the going market rate for this type of portfolio.

Members of Group management

The global annual remuneration of members of the Group management includes a salary and a variable element based on the individual's performance and the achievement of the Group's objectives. The variable element may be payable in cash or in the form of Kudelski SA bearer shares.

Shares and/or stock options may be attributed by the Remuneration Committee to members of Group management and/or to staff members in order to give them an interest in the long term objectives of the company.

5.2 Compensation for acting members of governing bodies

The total compensations granted directly or indirectly by Kudelski SA or by one of its affiliated companies during 2003 to members of the Board of Directors and/or members of the Group management amounted to CHF 5 881 074.

This sum breaks down as CHF 5 586 074 for executive members of the Board of Directors and for members of the Group management and CHF 295 000 for non-executive members of the Board of Directors.

These figures include the cash bonuses paid in relation to the financial year in question, even if they were paid at a later date.

No severance payments were made to persons leaving positions on the governing bodies during the financial year 2003.

5.3 Compensation for former members of governing bodies

A total of CHF 447 560 was paid to two former members of the Group management in 2003. One of these persons became scientific consultant to the Group management.

5.4 Share allotment in the year under review

During the financial year 2003, a total of 74 600 bearer shares of a nominal value of CHF 10 each was allotted to executive members of the Board of Directors and members of Group management. No shares were allotted to non-executive members of the Board of Directors.

5.5 Share ownership

The number of Kudelski SA shares held on December 31, 2003 by the entirety of the executive members of the Board of Directors and by members of the Group management of Kudelski SA as well as the entirety of the parties closely linked to such persons was 12 969 045 bearer shares and 46 300 000 registered shares.

Excluding the Kudelski family, the number of Kudelski SA shares held on December 31, 2003 by the entirety of the other members of the Board of Directors as well as the entirety of the parties closely linked to such persons was 1 431 620 bearer shares.

5.6 Options

The Kudelski Group implemented a new option plan in 2003. The situation on December 31, 2003 is as follows:

Executive members of the Board of Directors and members of the Group management and parties closely linked to such persons:

Year of grant	2003	2003	2003
Number of options	43 960	43 960	43 960
Vesting	01.04.06	01.04.07	01.04.08
Maturity	01.04.07	01.04.08	01.04.09
Exercise price in CHF	20	20	20

Non-executive members of the Board of Directors and parties closely linked to such persons:

Year of grant	2003	2003	2003
Number of options	6 000	6 000	6 000
Vesting	01.04.06	01.04.07	01.04.08
Maturity	01.04.07	01.04.08	01.04.09
Exercise price in CHF	20	20	20

5.7 Additional fees and remunerations

The additional fees (including consulting fees and fees relating to other contracts/agreements) and other remunerations paid by the Kudelski Group for services rendered during the financial year 2003 to members of the Board of Directors and to parties closely linked to them were as follows: CHF 634 903 to Patrick Fœtisch as legal advisor for the various requests of the Kudelski Group.

5.8 Loans granted to governing bodies

At December 31, 2003, Kudelski SA did not have any guarantees, loans, advances or borrowings in favor of members of the Board of Directors and members of the Group management or parties closely linked to such persons.

5.9 Highest total compensation

For the member of the Board of Directors upon whom the highest total compensation was conferred during 2003, the elements are as follows:
– compensations: CHF 2 889 371 (in cash)
– share allotment: 51 000 [1][2]
– option allotment for 3 years: 57 000 [1]

[1] Allotted during the first quarter of 2003
[2] Subject to restrictions

6. Shareholders' participation

7. Changes of control and defence measures

8. Auditors

The provisions of the Articles of Incorporation dealing with the participation rights of shareholders are in compliance with the law as laid down in the Swiss Code of Obligations.

7.1 Duty to make an offer

Kudelski SA has no provision on opting out or option up in its Articles of Incorporation. Thus the provisions regarding the legally prescribed threshold of 33⅓% of the voting rights for making a public takeover offer set out in Article 32 of the Stock Exchange Act are applicable.

7.2 Clauses on changes of control

No such clauses exist.

8.1 Duration of the mandate and term of office of the lead auditor

The auditors of Kudelski SA are Pricewaterhouse-Coopers SA. Some affiliated companies of the Group are audited by other auditors. The auditors were reappointed for a statutory period of one year by the General Meeting of Shareholders of Kudelski SA on May 23, 2003.

The mandate of PricewaterhouseCoopers SA began in 1985 and has been under the responsibility of Felix Roth since January 1, 2003. Before then the mandate had been carried out by Dominique Lustenberger, who had exercised that function since 1995.

8.2 Auditing fees

The Kudelski Group paid the sum of CHF 799 039 to PricewaterhouseCoopers for auditing services for the year 2003.

Auditing services are understood to mean the work required each year to examine the consolidated accounts of the Group and its subsidiaries and to prepare the reports required under the laws of each particular country, performed by PriceWaterhouseCoopers. In addition, some audit assignments were placed with other auditors.

8.3 Additional fees

The Kudelski Group paid the sum of CHF 553 916 to PricewaterhouseCoopers for additional services for the year 2003.

Additional services are understood to mean in particular services such as the auditing of occasional transactions, the implementation of new or modified accounting methods and other services such as advice offered before mergers, acquisitions and sales of companies. They also include services relating to the monitoring of international laws on corporations as well as advice concerning tax and the management of risk.

8.4 Supervisory and control instruments per taining to the audit

The objective of the Audit Committee of the Board of Directors is to provide effective and regular supervision of the financial reporting processes of the company in order to ensure their integrity, transparency and quality. To this end, and under its terms of reference, it is responsible for monitoring the work of the external auditors.

For more information on the Audit Committee, please refer to points 3.5.2 and 3.5.3 of this report.

9. Information policy

The Kudelski Group keeps investors regularly informed of the following developments:

– progress of business, major new contracts
– changes occurring in the management of the Group
– acquisitions or sales of companies
– half-yearly and annual financial results

Issued in conformity with the rules in force on the Swiss Stock Exchange concerning factual publicity, the press releases are available on the Group's web site (www.nagra.com) simultaneously with their publication. Information and a link on the home page of the site allow direct access to news. The Group communicates as often as necessary in this manner, around five or six times a year over the course of the last three years. The press releases are generally published in French and in English. In certain specific cases a German version is likewise provided.

Information relating to each member of the Group is published independently by that company in accordance with the publishing regulations of the Swiss Stock Exchange.

The financial results are presented to investors and financial analysts in a press conference, which is held twice a year. The persons invited are also able to follow the conference by telephone.

The Group's web site is a permanent source of information. The Investor Relations section contains in particular a list of the principal dates of the institutional calendar (publication of results, general meeting) as well as the main publications of the Group (annual report, half-year report).

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