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NOTE FROM THE PRESIDENT

"A BIG CHANGE FOR IDIAP, NEW OPPORTUNITIES FOR THE TOWN"



Olivier Dumas

Mayor of Martigny and president of the Foundation Council of Idiap

Idiap employs around one hundred people, manages European research projects, works for the American government and its research fields are at the heart of global technological issues. Whilst Martigny is of course going to continue its cultural development and the development of its services, it also has to invest in research and industry.

Since the institute was created in 1991, the municipality has always encouraged its activities and supported its development. Again in 2007, almost 500,000 Swiss francs were allocated to Idiap. However, let there be no mistake about it – only 25% of the institute's budget, i.e. two million out of eight, comes from public financing. The remaining six million are obtained as part of research projects contracted by public or private institutions, contracts won due to the institute's quality of work and dynamism.

Idiap moved to Centre du Parc last summer, which on the one hand is a big change for the institute, and on the other hand opens up new development perspectives for the region. In fact, the town wants to take advantage of Idiap's presence in this district to conduct new town planning projects, particularly the construction of a technology centre. This is currently under consideration. The sector situated between the railway station and Centre du Parc will be reassigned to housing and businesses, enabling the town of Martigny to revive this district, establish a link between the town centre and Idiap, open up new opportunities towards the east, centralise certain activities and shrewdly continue its expansion.

Idiap is not "just" a research institute. It is also a powerful catalyst for development. The institute's management has always shown willingness to invest in industry and can pride itself on having achieved this with strength and talent over the past few years. On moving its premises to Centre du Parc, Idiap has brought with it the start-up companies connected to it, as well as several new ones. The recent creation of a group of developers, the increase in the number of industrial partners, the growth of the IdeArk company incubator and the creation each year of several spin-off companies at the heart of the institute are witness to this.

Martigny now has the necessary financial capacity to support Idiap. Encouraging its creative power and development, making the most of its immediate environment, encouraging the emergence of skills networks and setting up new service providers, are some of his priority objectives. The town's economic future will be strengthened.

Setting up the Regional office for economic development in French-speaking Valais on Idiap's premises is yet more proof, if needed, of Idiap's involvement in the local economy.

I would like to thank the institute's management and employees for their enthusiasm and for the opportunities that they offer the town, and I look forward to working together with you on the new technology park project.

A handwritten signature in blue ink, appearing to be 'O. Dumas', written in a cursive style.

MESSAGE FROM THE DIRECTOR

"WE SPEAK THE LANGUAGE OF ENTHUSIASM, MULTI-DISCIPLINARITY AND INNOVATION"



Hervé Bourlard
Director of Idiap

During the last five years, Idiap has grown rapidly. Between 2001 and 2007, the overall budget has practically doubled, whilst the share of financing originating from research projects has increased by 160%.

These figures are a spectacular demonstration of our success and our dynamism. Twelve years ago, when I took over as the head of Idiap, many considered the institute's future to be in my hands. This is certainly flattering, but now totally inappropriate. These excellent results come from the work of all the employees, in particular that of the scientists who take on a considerable volume of work and show exemplary intellect. The teams are autonomous, they take responsibility, show initiative and work overtime when need be. Our eighty scientists come from twenty different countries on five different continents but speak the same language, that of enthusiasm, exchange of ideas, multi-disciplinarity and innovation. This professional fervour is contagious and I am happy to be part of it.

Behind the wonderful development expressed by these figures, hides another conclusion – Idiap's dynamism is financially rewarding. Let us simply take an example on a European level. The institute is now a key partner in a large number of European research programmes in areas that interest us. Idiap is also the coordinator of several European research projects, including three "integrated projects". It is a fact that we are at the centre of the international competition. And to stay there, at this stage we must expand our teams and take on those with top skills. We are working on it.

Lastly, 2007 and 2008 represent a transitional period for the institute. New premises, new logo, new graphic identity – which you will see in this management report – Idiap is gaining confidence and has clearly confirmed its identity as a profitable and independent research institute. Beyond appearances, this approach symbolises our wish to continue on the road of innovation, growth and success.

Our district is soon to welcome a technology park. This project, initiated by the town of Martigny, is a tremendous opportunity for Idiap to establish its position as a "mixed" institute, combining fundamental research and industry, and to further consolidate external links. A few months ago, I met by chance on a return flight from Helsinki, the Director of Debio R.P., a pharmaceutical research company based in Martigny. We were going, without knowing it, to meet with the same company, which manufactures both packaging for medicines and casing for mobile phones! This coincidence finally led us to discuss potential partnerships concerning intelligent medicine dispensers. I have always thought that without this link to the outside world, research would have no chance!

Thank you to all the institute's employees for their commitment. I wish them, and you our readers, even greater success for 2008.

A handwritten signature in blue ink, which appears to read "H. Bourlard". The signature is stylized and written in a cursive-like font.



R E S E A R C H



RESEARCH AREAS

COMPUTERS AT THE SERVICE OF MAN

In their laboratories, Idiap scientists compose algorithms, record images and sound, produce prototypes, and their work interests the largest telecommunication companies. But what are they looking for? We try to decode it.

Human beings use speech to communicate with their fellow men. Although their exchanges are also rich in other types of language (body language, sign language, expressions, etc.), the voice remains the sole organ that men use consciously to transmit a message directly to other humans.

At the dawn of the XXIst century, humanity entered a new era of communication. Technological tools invaded everyday life, profoundly changing our way of communicating, sending a written message, finding information, making purchases, telephoning, listening to music, etc. At the office, at home, in the car, on the train or in a plane, at the supermarket and even in the street, every day humans have to communicate with machines. With a computer they speak using a "keyboard and mouse", with their mobile phone they only have eight keys with which to compose words, to use their personal stereo they have learnt the language of touch, and behind their supermarket trolley they become familiar with the equipment for reading barcodes. And this is only the beginning. Society never ceases to become more automated, more computerized, and new electronic devices regularly arise to change people's habits.

Training machines to speak our language

Although a part of the population discovers, adapts and finishes by happily adopting these new tools, many people are left behind, incapable of dealing with these developments due to their age or some sort of handicap.

In this context, Idiap has set itself the task of researching and developing new technologies intended to improve the well-being of humans, particularly in areas where man and machine interact. Its research programmes involve improving man-machine interfaces, via voice recognition, biometric authentication, automatic learning or even artificial intelligence. More prosaically, relations between humans and machines would be greatly improved if man could simply speak to the machine, if the machine were able to "see" and identify him and, better still, if he could communicate with the machine through thought.



Management of multimedia content

Idiap works on this in its laboratories and its discoveries, combined with those of other institutes, have already brought man and machine closer together. Now a human being can enter a secure room simply by looking at a camera and announcing his identity, he can be authenticated by his bank using a mobile phone equipped with a camera, he can dictate a text to a computer, and much more. In the future perhaps he will be able to find a section of a film just by giving some keywords, order a door to open by thought or have a discussion with his computer, etc.

The introduction of all these new technologies has certainly improved everyday life, but it has also led to another phenomenon – the massive increase in the number of multimedia data. The computerization and on-lining of texts, music, images and videos have been so fast and are progressing at such an exponential rate that it is becoming necessary to develop new tools for managing multimedia content. This is also an area that Idiap scientists are turning their attention to, in order to enable more efficient tracking, sorting and archiving of all these data.

In 2007, the institute known as "the little Valais EPFL" (Ecole polytechnique fédérale de Lausanne) has a bright future. Not only due to its tremendous progress and its inexhaustible thirst for innovation, but also because its research is at the heart of the areas of interest of tomorrow's companies.





IDIAP, PROJECT INCUBATOR

FROM SION TO WASHINGTON, THEY TRUST IN IDIAP

Due to its dynamism, its capacity for innovation, its technology transfer skills and its commitment to training, each year Idiap is granted many research projects, both on a local and a global level. Who are those that put their trust in – and grant their subsidies – to the institute, and what are their intentions?

You only have to take a glance at its sources of funds to be convinced that Idiap is blooming. The research projects carried out by the institute are entrusted to it by authorities from all levels, from the national fund, to Europe, to the United States. However, their motivations and objectives are different. Here is an overview of Idiap's relations with its agents, which provide three quarters of its financing.

Valais: priority to economic development

Support of scientific research is not at the centre of the strategic outlook of the Canton of Valais. Economic development, creation of high value-added jobs and enticing back talented expatriates, are, on the other hand, some of the government's priority objectives. Hence the creation, in 2004, of The Ark foundation. Its objective is to build the technological Valais of tomorrow, by facilitating, in particular, the creation, setting up and growth of companies in the canton. The Ark particularly supports projects with good commercial prospects and it is in this context that Idiap, through the intermediary of the startups that are created in its corridors – KeyLemon, Klewel, Cinetis, etc. – works in partnership with the foundation. HES-SO Valais, a trusted partner of Idiap, is also involved in these projects most of the time. Furthermore, the two institutions are linked by a partnership agreement.

Switzerland: guaranteed support of scientific research

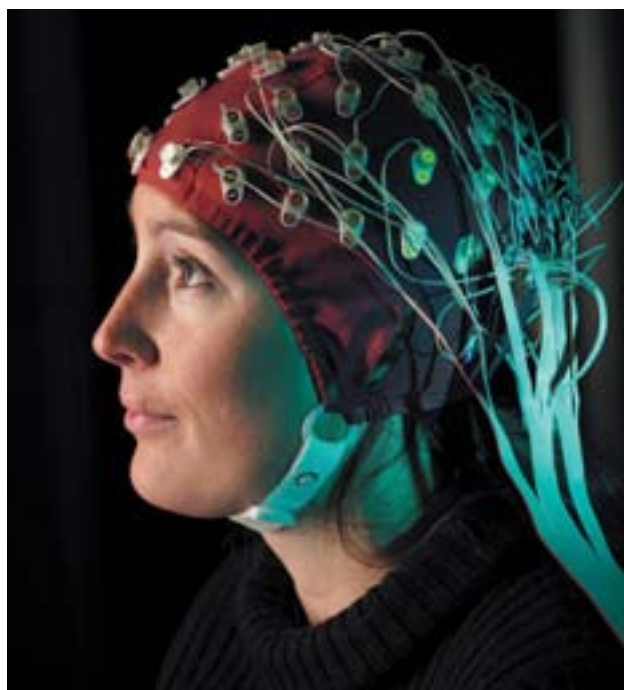
One of the Swiss Confederation's constitutional objectives is to support scientific research in all its forms. This is put into practice by providing assistance to universities and technology institutes as well as by means of various programmes created especially with this objective in mind.

- The Swiss national science foundation (SNSF) particularly encourages basic research. Like The Ark, the FNRS has the status of a foundation and thus each year receives a budget from the federal authorities to be redistributed. Selection committees decide whether to allocate research contracts to the various institutions that apply. At Idiap, the funds received are mainly used to finance students' PhD theses.

- As the Swiss Confederation's agency for promoting innovation, the CTI (Commission for technology and innovation) undertakes in a targeted way to ensure the transfer of knowledge and technology between the higher education establishments and companies, and supports the implementation of applied research and development projects. It regularly subsidizes combined projects (academic and industrial partners) submitted to it by Idiap.
- The National Centres of Competence in Research (NCCR) program aim to encourage long-term research projects dealing with topics of strategic importance for the future of science and Switzerland's economy and society. Currently in Switzerland there are around twenty centres working on climate, genetics, nanosciences, etc. Idiap was appointed in 2001, from the beginning of the programme, to manage the IM2 (Interactive and multimodal management of information systems) national centre of competence in research and had its contract renewed for 2006-2009. On the many projects carried out within this framework, the institute principally works in partnership with EPFL, EPFZ, the universities of French-speaking Switzerland and the higher education establishments, mainly HES-SO.

Europe: promoting international competitiveness

Faced with the growth of the United States and Asia, since its construction Europe has become aware of the necessity to remain competitive. To achieve this, framework research and development programmes have been set up in accordance with



identified areas of interest (transport, population, nuclear research, etc.). Invitations to tender have been launched for each of them. In order to make an offer partners from various countries form a consortium in accordance with the complementarity of their skills. The partner entities are generally a balance of research institutes, universities, manufacturers and start-ups. In the field of information technologies, Idiap manages several projects relating to its preferred topics (speech processing, biometric authentication, management of multimedia content, etc.). Most of the time, the work is completed by the delivery of a solution or a prototype, which is generally taken up by the partner manufacturers. The objective for the European Union is to increase the competitiveness of companies.

The United States: technology for national defence

Industrial projects aside, all the contracts that Idiap have been granted by the United States come from the American Defence Department (DARPA, Defense Advanced Research Projects Agency). It has in-depth knowledge of the global market and the research carried out around the world. It freely selects its partners and invites them to submit research proposals. This is how Idiap came to be contracted for two projects in the last few years.



From the idea to market launch THE LIFECYCLE OF A RESEARCH PROJECT

At the beginning there is the idea, followed by the prospect of a new technological tool. The researcher checks that the idea is new, formalises it, and set down on paper, the idea becomes a research project. The researcher takes on partners to supplement his skills. All that remains is to find the financing. Once finalized, the project is submitted to a support authority. If the assessment is positive, the project can live on – the experiences of the various partners are then pooled, the research programme and schedule are defined and the results are gradually made public (publications, websites, software, conferences, reports, etc.). The financing authorities periodically inquire about the progress of the work. The process is completed, depending on the case, by the filing of a patent or the delivery of a prototype.

Idiap plays a fundamental role in this type of process. In fact, the institute offers assistance in drawing up and finalizing the project, administrative and financial monitoring, creating websites, training staff, organising meetings and conferences, producing communication media, circulating information and providing high-performance hardware. All the non-science related services that constitute an ideal breeding ground for projects to be hatched.



DEVELOPMENT ENGINEERS

THE ESSENTIAL LINKS BETWEEN RESEARCH AND INDUSTRY

There is a long road between the researcher's mathematical formulas and the development of a prototype. Each day at Idiap, ten development engineers fill in the gap that separates the idea and its application. Since the end of 2006 they have been working together in the same office and they are now an essential cog in the working of the institute.

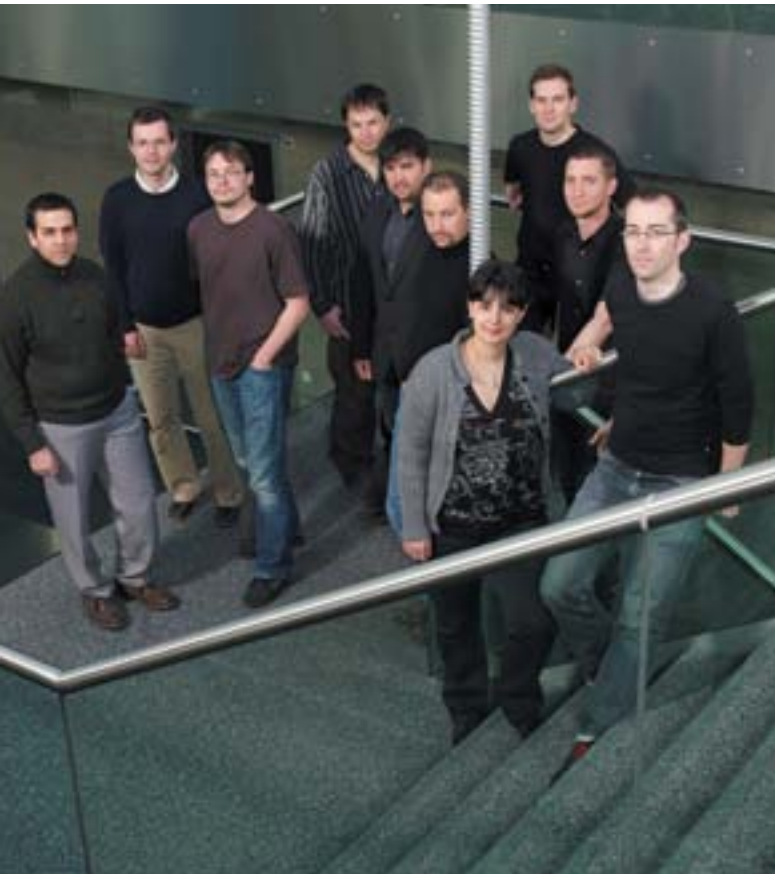
Without them, the researchers' projects would amount to an obscure series of algorithms. Without them, Idiap's innovations, as wonderful as they are, would end up being shelved. The developers now represent one of the strong links of the institute. Their main task is to convince the world of industry by demonstrating the value of the technology produced by research. Creating demonstrations is an integral part of this role. For example, to explain to company managers how a face detector works, the developers will programme a graphical interface and a management module for the webcam using raw mathematical formulas. They will then work with an external partner, such as HES-SO Valais (University of Applied Sciences of Western

Switzerland), and will finally develop a prototype, which will enable Idiap to show the fruit of its research better than any paperwork.

Development of demonstrations also interests the researchers themselves, as they can use them to show the result of their work at scientific conferences for example. Therefore, the group also manages development for academic projects, such as the person monitoring system in the surveillance videos of the Rome underground, which will be put forward as part of a European research programme. Lastly, the developers' task is to respond to in-house requests. They help out colleagues and resolve code or licence problems.

Teamwork and a stimulating environment

Just a short time ago, Idiap only employed a handful of developers, dispersed around the premises, each working individually for some researcher or other. On the initiative of Frank Crittin, industrial relations manager, a team of around ten people was formed. Now this team works in an open office on the fourth floor of the institute and benefits from a stimulating working environment. All requests are made directly to the group manager, who deals with them and shares out the tasks. The layout of the premises facilitates communication between the employees and the group's strength essentially rests on the complementarity of the HES (University of Applied Sciences) and EPF (Swiss Federal Institute of Technology) engineers, some of who also have direct research experience since they have PhDs. The first group basically concentrates on development activities, while the second group facilitates dialogue with the researchers. The era of backroom developers is now over. The growth of Idiap can now count on a new efficient and recognised unit.



THE START-UPS THAT ORIGINATE AT IDIAP

At Idiap, one project in ten originates from a partnership with a company, which makes it one of the most active research institutes in the world on an industrial level. In 2007, five new contracts were signed. Here is an overview of the projects in progress.

Being in touch with market expectations and fostering exchanges with the world of industry form part of Idiap's philosophy. In 2007, the institute continued its dynamic policy of opening up and consolidating its partnerships with large companies such as Swisscom or Logitech. Furthermore, due to the support of the Federal agency for promoting innovation, the CTI (Commission for Technology and Innovation), the institute has been able to undertake new projects with start-ups and SMEs. These partnerships with avant-garde companies are particularly interesting for Idiap because they enable it to start a dialogue with tomorrow's manufacturers. Here are some examples.

- **Who is really on the other end of the phone?**

During telephone conferences how can you be sure that the various participants are actually who they claim to be? For the EyeP Media company, which offers technological solutions for mobile telephony operators, Idiap has developed a biometric identification system capable of recognising in real time, in a discreet and consistent way, the voice and face of the various participants.

www.eyepmedia.com

- **Stabilising online videos**

In May 2005 a CTI project, in cooperation with HES-SO Valais, resulted in the Cinetis start-up being established on the Idiap premises in Martigny. The Moosta project is part of this partnership. It concerns video stabilisation technology that has already been applied to the digitization of argentic films, even old ones. From this technology, Cinetis developed a service available on its website in partnership with Idiap, which stabilises all videos on request.

www.cinetis.ch

- **Smile... You can come in!**

The bimodal authentication technology developed by Idiap greatly interests the security industry. The Sabbuca project, developed in partnership with HES-SO Valais, the Foundation for innovation in Valais, The Ark, and the State of Valais, is currently being tested in the cantonal IT department building. Connected to a simple webcam, it can recognise a person by his image and voice. The employee

speaks in front of the computer terminal, is identified and then allowed access to the building. If the results of the test prove to be conclusive, Sabbuca will then be marketed.

- **Voice-controlled PDA**

The Personal Digital Assistant (PDA) is now widely used in cafés and restaurants. Illegible order sheets are a thing of the past. Customers' orders are recorded on a touch screen, immediately transferred to the bar or the kitchen, and the system greatly facilitates management of invoicing and stocks. However, it does have limitations, particularly for establishments with very extensive menus. These waste a lot of time scrolling through lists of products before finding the one ordered. To help these types of companies, the Odysis IT company in Lausanne has come up with a voice-controlled PDA solution, for which Idiap has developed a recognition engine. The research project, financed by the CTI, has already enabled a promising prototype to be developed. The partnership with Odysis will be extended until the product can be marketed.



- **A direct link with your favourite songs**

On behalf of the Museeka company, Idiap has developed a software programme that enables the user to quickly and easily find his favourite type of music, characterised by a particular rhythm, notes and keys. This application was inspired by the institute's research into automatic learning on the basis of examples (machine learning). The initial results are very conclusive. The next step is to form a link between the type of music and words.

www.museeka.com

In 2007, Idiap worked in partnership with Swisscom, Logitech, Qualcomm, France Telecom, Deutsche Telekom, Denali Software, ACM (Association for Computing Machinery), the cantonal IT department of the State of Valais, HES-SO Valais, Canal 9, and many others

THREE KEYS TO UNDERSTANDING IDIAP'S RELATIONSHIP WITH INDUSTRY

IdeArk, an interface between industry and research

Whilst Idiap keeps an eye on what is happening in the industrial sector, businesses also have a very keen interest in the work of Idiap. IdeArk, the institute's subsidiary, acts as an interface between the two worlds. It relays the concerns of companies to the scientists, identifies market trends and facilitates the conversion of research results into innovative solutions. IdeArk's task is also to support start-ups and SMEs active in the same fields as Idiap.

Becoming a partner of Idiap: variants and methods

Idiap generally acquires industrial partners as the result of three types of process. The most direct way is when a company contracts the institute to carry out research or development, in the form of a thesis for example, and finances the project. Another possibility is that the company files an application for support with the CTI, the Federal agency responsible for supporting innovation through financial assistance of combined industrial/academic projects. The final option is via the Foundation for innovation in Valais, The Ark. In fact, this foundation supports projects that are the result of research carried out at Idiap, as well as start-ups arising from these promising technologies.

Intellectual property, an essential asset

During an industrial partnership, the company may either finance the research work for a certain period, or buy the technology directly from Idiap. In this way it acquires use and marketing rights. It can also obtain exclusivity rights for a certain time and for its area of activity. However, in order to be able to use its results to carry out other research and therefore keep its autonomy and innovative strength, the institute has to retain the intellectual property rights to its inventions. Therefore, usually it sells non-exclusive licences, as would the author of a book or a photograph.

Samy Bengio: researcher at Google

"THEY GAVE ME AN OFFICE AND CARTE BLANCHE TO WORK ON WHAT I WANTED!"

After seven years spent at Idiap, Samy Bengio left for California to join the Google research team in the mythical Silicon Valley. One Tuesday morning we spoke to Samy, who is originally from Quebec, by telephone and he told us about his years in Valais and the new challenges that face him in California.

How did you come to work for Idiap?

My girlfriend worked in Switzerland, at EPFL, and I wanted to join her. I applied to Idiap and was taken on as a post-doctoral researcher. I had planned to stay for just one year and then go back to Quebec, but the work turned out to be more interesting than I first thought – the head of the "machine learning" team left shortly after my arrival and I was asked to replace him. As a result I stayed there... seven years!

What memories do you have of this long stay?

I really liked the environment at Idiap. There I was able to discover all the facets of the work of a researcher. I learnt how to apply for financial support, supervise PhD students, write articles, and even give lectures. I also have fond memories of Valais and its people. They are a little insular and they are proud of that. The people of Quebec are also alone in defending their language in North America. And then we have the same love of good food and the good things in life!

Why did you leave?

After seven years I felt that I understood how things worked. I wanted to take on other challenges elsewhere and I chose Google. Here, everything is in excess. The amount of data to be processed, the quantity of computers available to do it, the number and diversity of problems... All this far exceeds what one could imagine doing with Idiap's resources. And I also have an enormous amount of freedom. When I arrived I was given an office, two computers and carte blanche to work on what I wanted. It took me several months to understand what was going on, the data that are collected, and finally I chose what I wanted to work on.

What did you choose?

I am working on sorting images based on textual data. Currently, if you search for an image on Google, the search engine uses the environment and not the image itself to make its choice. As a result you find yourself with a lot of "rubbish". My role is to in-



tegrate shape and image recognition, a system that I had started to develop at Idiap with the help of my PhD students.

How many researchers work at Google?

Google worldwide now has 20,000 employees, including 8,000 in Silicon Valley, but there are only around 150 researchers, the majority of whom work here.

Are you going to maintain ties with Idiap?

Of course! When I left I was still responsible for two PhD students. I invited them to come to join me here for six months each. It was great work experience for them and invaluable help for me. I am also working on publishing a book on recent machine learning methods applied to speech and speaker recognition problems, together with three scientists from the institute. Nowadays, geographical distance is not really a problem.



Klewel: the content of a conference available online within 24 hours "ENGINEER TODAY, ENTREPRENEUR TOMORROW"

Created in November 2007 at Idiap by Maël Guillemot, the Klewel spin-off offers recording of conferences and uploading onto the Internet within twenty-four hours, thus making them accessible to Internet users around the world. The project, which has received several awards, has been developed under the supervision of the best coaches.

In Breton, "klévèt" means "listen" and "gwelèt" means "watch". Klewel is a combination of the two, and its Breton creator is Maël Guillemot, currently a development engineer at Idiap. "I arrived in 2002 to do my Master's course, and in the end I stayed", says the young man with a smile. Clearly, the mountain air suits him. In November 2007 Maël Guillemot founded Klewel, a spin-off offering an innovative service.

Video, sound and slides

"The principle is simple. We travel to the location of the conference, we record the video, the sound and the slides that are shown, and within twenty-four hours, all Internet users can follow the talks as if they were there. And for those looking for particular information, they just need to enter the key word, and they are immediately taken to the slide that alludes to it, with the corresponding sound and video in series." Maël Guillemot uses "we" because he is working in partnership with Jean-Marc Odobez and Alessandro Vinciarelli, Idiap researchers. "Alessandro is specialised in multimedia information research, and Jean-Marc in the processing and recognition of text in images and videos." Their objective? In the long-term, to equip Klewel with a search engine that works using voice recognition. "We are progressing together with the research aspect. They want to stay in the academic field, and I want to move towards business."

First customers: ACM and Unicef

Klewel perfectly meets the needs of seminar organisers. Until now, in order to keep a record of their conferences, they had to hire a TV team of several people and the result, burnt onto DVD was only available after several weeks, which is far too long to wait. "If people do not have the video within the next few hours, they switch over to the next thing and it's too late. There is already other information coming from elsewhere." One person from Klewel travels to the location, the talks are uploaded quickly and the user can choose the sections that interest him. The contracts signed so far are rather encouraging: ACM (Association for Computing Machinery), one of the largest science conference organisers in the world, and Unicef.

Invaluable help from Idiap

Chosen by the Valais incubator, The Ark, to benefit, from August 2007, from its support programme, the spin-off has also been designated by IMD (International Institute for Management Development) as one of the eight most promising new Swiss companies. At the Lausanne institute, where some of the best future entrepreneurs are trained, two groups of experienced students are going to use Klewel as a practice case. "The experiment will end in September with a presentation of Klewel to investors in the United States." The venture seems to be on the right path. "Without Idiap, none of this would have been possible. Its cooperation and structural support are invaluable," insists Maël Guillemot.



KeyLemon, the login that works with zygomatrics "WE DIDN'T EXPECT SUCH SUCCESS!"

Sit down, smile, it's done. Your computer login is complete. This is KeyLemon, a biometric identification software programme created at Idiap by Yann Rodriguez. More than 200,000 users throughout the world have already downloaded the free version of it and a company has been set up to conquer the market with the pay version.

KeyLemon means the end of passwords and daunting identification forms. Any user with a webcam can now unlock his computer with a quick glance or a simple smile. Yann Rodriguez was a PhD student when he came up with this idea. He was looking for a fun and cheap way of using voice / face bi-modal authentication. "This technology is generally used for high security applications, such as physical access control at the entrance to banks or military installations. I wanted to explore a different way by providing the general public with a simple, user-friendly and useful tool." With the support of Idiap, he developed a software demonstration that he launched on the web. In a few months, without any advertising, there have been 200,000 free downloads from the www.keylemon.com site. A community of Internet users from around the world has formed around KeyLemon, and the project has been awarded The Ark and VentureKick scholarship prizes, which support marketing of innovative ideas. "We didn't expect such success!" says Yann Rodriguez.

A trio at the head of KeyLemon SA

Thanks to the Business Experience programme of HES-SO Valais, the creator of KeyLemon has found some skilled partners to market his software. He founded a start-up with the economist Gilles Florey and the business management professor Antoine Perruchoud, which will distribute the first pay solution in June 2008. Internet trials and a market survey have confirmed that there is a market for this type of product. The creator of KeyLemon is enthusiastic. "It's exciting to create and then develop an idea. I want to experience being an entrepreneur, taking risks and making choices. Our ambition is to become established on this market, attract the attention of investors and partners, create new products and develop our company!"

www.keylemon.com



I D E N T I T Y



NEW FACILITIES, NEW GRAPHIC IDENTITY



IDIAP MOVES TO CENTRE DU PARC

In August 2007 Idiap left its three sites in the town of Martigny to move to more spacious premises in the west wing of Centre du Parc. This move is of course in keeping with the institute's development, but also offers it new prospects for the future. A chance for Idiap to change its graphic identity.

"The current premises no longer meet our growing needs for more space." It is with these words that Jean-Albert Ferrez, deputy director of Idiap, started his announcement about the institute's move to the journalists at the press conference organised on 30 May 2007 at Centre du Parc.

In 1991, when it was founded, Idiap accommodated its ten employees on one floor of Villa Tissières. By spring 2007, the number of employees had increased to around one hundred and occupied two floors of the villa, one floor of the UBS building and the whole of the Pavillon Dalle Molle. "This geographical dispersion was preventing social links being formed within the institute and was therefore harming the dynamics of various groups and projects" explains Jean-Albert Ferrez

Support from the town and Groupe Mutuel

The Mayor of Martigny and President of Idiap, Olivier Dumas, was aware of this problem of lack of space, and got in touch with Groupe Mutuel in spring 2007. At this time the insurer was completing the construction of its new administrative premises in the town centre, therefore freeing up those that it was occupying – and which it owns – at Centre du Parc. Very quickly the institute's management weighed up the advantages of a



possible move. The premises can be used in their current condition, needing only some minor work, including the installation of a specific cooling system in the computer servers' room. The rented area can easily accommodate 120 people and there are many ways in which the building could be extended. The increase in support from the city and sponsoring by Groupe Mutuel were the final incentives in convincing the institute to make the move.

In August 2007, Idiap moved all of its employees and activities to Centre du Parc, in the "conference" part of the building.

Perfectly suited architecture

Jean-Albert Ferrez acknowledges that, "This move is in keeping with Idiap's prospects for growth with regard to its activities, staff and of course budget. This area of 2,300 m² not only meets our current needs, but will also be able to accommodate future additional growth both in the building and in the immediate surroundings."

"In addition to the comfort that it offers Idiap's employees, this new building – which you can read about in this management report – perfectly symbolises what the institute has become. Solid, bright, with a harmonious blend of materials, its architecture offers both the calmness required for laboratory work



and meeting areas conducive to dialogue and the birth of creative ideas", says Jean-Albert Ferrez contentedly.

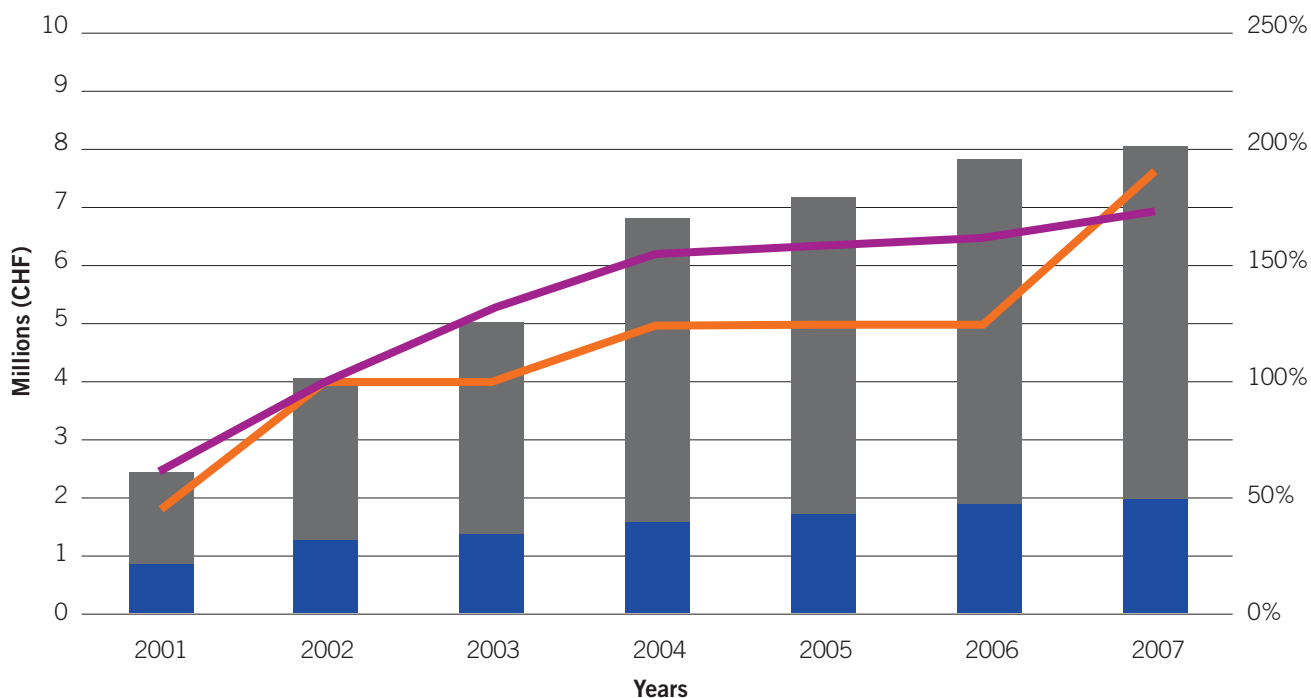
To accompany this change of location and to symbolically mark the start of a new era for Idiap, that of ambition, the institute has also given itself a new look. The new take on its logo is contemporary, technological and powerfully expresses the values that are important to Idiap – innovation, achievement and independence.



2001-2007, EVOLUTION IN FIGURES

During the last six years, the Iddiap research institute has continued its upward path, as can be seen from the graph below. Between 2001 and 2007 the overall budget practically quadrupled, changing from more than 2 million to more than 8 million Swiss francs. This development is mainly due to the institute's dynamism and spirit of innovation, since the share of financing originating from research projects has increased by 268.7% whilst state aid has "only" increased by 129.8%. In the same

way, to enable the institute to deal with its increased commitments and responsibilities, the science team has gradually expanded. In 2001 there were 28 employees working on the 1,211 m² premises of Villa Tissières, the annexed house and a few offices at Sainte-Marie College, now approximately 90 people (76 full-time equivalents) work on the 2,321 m² premises of the west wing of Centre du Parc in Martigny.



■ Financing from projects ■ State financing ■ Number of employees ■ Area occupied

Percentages: basis 2002=100%



IN 2007, IDIAP CAUGHT THE ATTENTION OF THE MEDIA..

... due to its innovative projects:

Swiss researchers separate the "lolitas" from a search for Lolita Morena on Google

"Nothing is more annoying than getting something that you did not ask for, whether in a restaurant or on Google. Particularly when you are looking for a photo of Lolita Morena in Google Images and end up with her birth chart or a pair of buttocks that do not belong to her. The problem is that there is no lack of photos of "lolitas" on the internet! Researchers from the Swiss national research centre, IM2, based at IDIAP in Martigny, have found the solution. They have developed a software application, named "Google Portrait", which is capable of detecting the presence of faces in a digital format image. (...) Companies could use it for applications in the fields of biometrics, video conferencing or surveillance systems."

24 heures Région La Côte, 28 September 2007

Smile and speak, you are being identified!

"Bimodal authentication is identifying a person by his face and voice using a machine. You show your face to a small camera, you speak and the system recognises you from its programme data. Accélérateur The Ark (the Foundation for innovation in Valais) spotted the potential of this Idiap technology in everyday life. This is how Sabbuca came about, a pilot project for controlling access to a Cantonal IT Department building. (...) Just a camera and a microphone are needed to authenticate the person and unlock the door."

Le Nouvelliste, 17 February 2007

An intelligent wheelchair, which uses its passenger's thoughts to guide it

"A wheelchair that steers itself by using its passenger's intelligence, harnessing his thoughts to apply them to its steering – the feasibility of such a vehicle, suitable for people with motor disability, who have maintained their cognitive functions, has broken new boundaries. A little while ago, the Catholic University of Louvain, in Belgium, demonstrated a prototype designed as part of a European project managed by the Idiap institute in Martigny. (...) The thoughts to be located are simple: right, left, forward. The principle consists of relying "both on the intelligence of the driver and on that of the machine, in a process of mutual learning". The patient wears a cap comprising 64 electrodes. (...) The designers, who are already working in cooperation with the CNA/SUVA (National Accident Insurance Fund) in Valais, hope to be able to raise the necessary funds to carry out trials in hospitals for clinical validation."

Le Temps, 15 May 2007

A simple smile to unlock your computer

"Unlocking your computer without typing a password is now possible using a webcam and a face recognition programme offered by the Valais company BananaSecurity. "Your smile is all you need to log in", is the slogan of the start-up under construction. (...) BananaSecurity has borrowed the biometric authentication technology, which enables face recognition, from the Idiap Research Institute in Martigny. A few days' beard growth or a new haircut will not prevent you from being identified."

La Liberté, 2 July 2007

... due to its rate of expansion:

A new start for Idiap

"After fifteen years at its Villa Tissières premises, Idiap has taken up its new residence at Centre du Parc. The research institute feels at home in Martigny and its Director, Hervé Bourlard, is looking forward to finally having reasonable sized premises. (...) Over sixteen years, Idiap has experienced spectacular development. In 1991 it had ten employees and today there are more than one hundred, including 85 researchers. The latter include some very highly qualified scientists. Almost forty EPFL (Ecole polytechnique fédérale de Lausanne) PhD students now work at Idiap and more than twenty nationalities are represented. The new premises of 2,300m² on three floors fully meet the needs of Idiap and will open up new prospects for the future."

Le Nouvelliste, 17 September 2007



Idiap in Martigny is expanding

Firstly the ground floor of a large house in Martigny. Then the first floor. Then facilities elsewhere in the town. This summer, Idiap will make itself much more comfortable on the outskirts of Octodure, by moving to one of the wings of the hotel and conference centre at Centre du Parc. Set up in 1991 as a non-profit foundation, the institute has experienced staggering growth. At the beginning it had only a handful of researchers, but now has around one hundred employees and an annual budget of more than 8 million Swiss francs divided between public (25%) and private funds, in the form of contracts. "Our absolute requirement is to maintain total autonomy", emphasises the Director, Hervé Bourlard."

24 heures Région La Côte, 4 June 2007



P R O F I L E S



SANDRA MICHELOUD, FINANCIAL DIRECTOR

"I LIKE TO TAKE UP CHALLENGES!"

Sandra Micheloud took up her position as Idiap's new Financial Director on 1st February 2007. A few months after her arrival, she gives her first impressions of the institute and its development and openly recounts her career and current working environment.



ID

| | |
|------------------------|---|
| Date of birth | 7 May 1970 |
| Date of joining Idiap | 1 st February 2007 |
| Marital status | Married |
| Place of residence | Monthey |
| Bedside books | <i>The Prince</i> , by Nicolas Machiavel, and detective novels |
| Most recent CDs bought | Various compilations of classical music and meditation (yoga) music |



How would you assess your first months at Idiap?

I feel good here, I like this particular environment, this multi-cultural atmosphere, which is almost student-like. However, it is completely different to what I am used to.

Where did you work before?

At Syngenta, in Monthey. There I was continuously faced with productivity demands and having to meet deadlines. At Idiap, these are not the elements that structure my days. The stress factor is different.

Do you not miss the adrenaline rush?

No, because I set my own objectives and deadlines. I actually work better under pressure!

How did you come to work for the institute?

The advertisement that Idiap placed in Le Nouvelliste immediately caught my attention. I had been looking for a management position for a long time. I have always wanted to take responsibility for my decisions. I vaguely knew about Idiap, I found out some information and I liked what I read very much. So I applied. When I received the reply from Mr Ferrez I knew

that I had made the right choice. I fitted in immediately and once again have the same pleasure of working in a team that I had in my previous job.

Don't you find all these figures daunting?

Not at all! Firstly my work is not limited to accounting tasks. Every day is different. I find myself filing photocopies, but quite often my work involves psychology, teaching or even public relations. And all the employees at the institute come to me with certain human resources issues, because these are also within my area of responsibility.

You seem very enthusiastic!

I actually have enormous enthusiasm for what I do. Since I have been working at Idiap, my family and friends have said that I've changed, that I have become calmer, and I do feel this. At Syngenta, although I had a supervisor, I did have some freedom. Here I have found a place to create and I finally have a chance to manage as I want to, which gives me peace of mind.

What is your opinion of the institute and its development?

The institute has developed rapidly over the last five years and is now a real SME employing around one hundred people. We are currently moving into the stabilisation phase. The situation is excellent but unfortunately there is a lack of staff and the scientists that we need are difficult to recruit since the market is stretched. Paradoxically, although Idiap has always been a considerable size, each morning I get the impression that I'm walking into a family business. In this Centre du Parc building there is real two-way communication.



JOHNNY MARIÉTHOZ AND FLAVIO TARSETTI, DEVELOPERS



PASSIONATE, ARTISTS, BUT ABOVE ALL... PERSEVERING!

Johnny Mariéthoz and Flavio Tarsetti, both from Valais, form part of the team of development engineers at Idiap. The former is one of the longest serving members of the institute since he has been there since 1998. The latter has just been hired. The former started with an apprenticeship as an electronics engineer, the latter dreamt of being a doctor. Today, the former coaches the latter. Together, they talk about their profession, a passion that they fell into "a little by chance".

Name: Johnny Mariéthoz

Age: 36

Marital status: married, two children

Place of residence: Chemin-Dessus

Date joined Idiap: 1998

Position: development engineer

PhD thesis: Use of discriminant models for text-independent speaker verification

Good and bad points (or vice versa): generous and talkative

Career:

For Johnny Mariéthoz everything began with an audio-video electronics engineer apprenticeship. At the end of his training he could not find work and, indisposed to doing nothing, he registered for the first year of Valais Engineering School (equivalent to the current HES-SO) so as "to keep busy". He passed the exam and continued. Whilst working towards his degree he met Eddy Mayoraz, manager at the time of the "machine learning" group, "the institute's first developer", who was looking for someone to design provers. Johnny Mariéthoz was hired. Immediately involved in European projects, he met scientists from all over Europe, went to work abroad for a few months, "learnt on the job" and finished by writing his PhD thesis.

Name: Flavio Tarsetti

Age: 24

Marital status: single

Place of residence: Martigny

Date joined Idiap: worked with the institute in autumn 2007 as part of his HES degree, was hired at the beginning of 2008

Position: development engineer

Bachelor thesis: Face tracking with a Windows Mobile phone

Good and bad points (or vice versa): passionate and ambitious

Career:

Trilingual since childhood, Flavio Tarsetti had planned to study... languages! On the advice of his parents, he chose a challenge over boredom, and opted for science subjects. Having obtained his school-leaving diploma, he took a one-year IT course at EPFL (Ecole polytechnique fédérale de Lausanne) simply because he was really interested in that. There he discovered programming and fell in love with it. He swapped his Rubik's cube for a computer, created his own games, enrolled in HES-SO Valais in Sion, with the Infotronics department, and completed his degree dissertation in December 2007. Two weeks later he went to work for Idiap. A definite choice. "This position gave me the chance to broaden my horizons and gain experience in several areas. I like to take on challenges."





Flavio Tarsetti

You are both members of the development engineers team. In concrete terms, what do you do?

Flavio Tarsetti: I am working on a CTI industrial project for the eyeP Media company. It involves bimodal voice and image identification. The idea, in the long term, is to be able to prove who you are to your bank over the telephone, for example. At the moment I am collecting together the databases – I go around the offices with a laptop and gather video recordings. Then I start on the code. I look at the algorithms that have been developed, and I try to optimise them. The last stage is the development. We extract the images, the sound, launch the algorithms and see if it works.

Johnny Mariéthoz: On this project, Flavio is working on face detection, which takes place on a mobile phone, and I am working on the authentication, which is done on a computer. As I am the one who originally devised this project, it is therefore also my responsibility to check that we perform the list of tasks as promised to eyeP Media. However, my role at Idiap is quite diverse. In terms of support, I participate in resolving problems both in pure IT and in algorithms and “machine learning”. I also carry out research in the area of speaker verification on which I continue to write papers when I have time. And we have also created a computer science library, Torch, which is freely distributed on the web and for which I provide support. And not forgetting that my job also involves coaching and motivating Flavio! (*Laughs*)

F.T.: He is a very good coach!

Really?

F.T.: Yes, really. Firstly, he is skilled, obviously, and he is very supportive. Whenever I have a question, I go to see him, and generally he either finds the solution or he puts me on the right track. I have a lot of respect for his career, his progress and I would very much like to follow in his footsteps.

Is he a good student?

J.M.: Yes. He is very enthusiastic, which is an essential quality for this type of job. He has only been here for a few months so I cannot yet judge fully, but he already has the driving force and he is good with people, which is essential. It's no use spending three hours on the internet looking for a solution when your colleague next door can resolve your problem in five minutes! You have to dare to go and find information. Not to mention that this creates contact, which is important in a team.

Why is this contact important?

J.M.: We do not work in a hierarchical production chain. Most of the time ideas are born and problems resolved when we talk. Since our institute works in multiple fields, when we see colleagues at lunchtime or in the cafeteria, we talk about technology, Internet news, current projects, and dialogue can create real synergies.

F.T.: It's true that we talk about work 90% of the time!

J.M.: Of course! We should even create more open spaces and set up blackboards there because it is there that exchanges are the most lively and creative.

So you only think about that?

F.T.: About work? Personally I find it difficult to switch off. I spend part of the night in front of my computer trying to develop applications. I think that you are born to be a developer, it's a passion, at least for code, for programming. Because basically it's experience that makes the difference. At college you learn to write code but to write code well you need intuition and this becomes sharper over time!

So writing code is like an art?

F.T.: I think so yes. We are of course scientists, but you could say that some write "beautiful" code, which is harmonious, aesthetic and pleasant to read.

J.M.: Personally, I would say that it is more craftsmanship. There is a love of work well done. But it is true that in research and in "computer science" there is a lot of creation and intuition. The thing is to use theory to find the right direction, then to use your intuition to find something that works.

What gives a code quality?

J.M.: Firstly its effectiveness. A code is good when the application that uses it fulfils its role properly.

F.T.: And by quality we also mean viability, the objective being to be able to reuse it in several years. Therefore, a good code must be documented. Otherwise no one will want anything to do with it. You have difficult reading what you have written several months later as it is but if it has been written by someone else and has not been explained...

J.M.: That is moreover part of the role of the developers, to coach the PhD students on the best way to write code, and to thus enable them to gain time and quality in their algorithms.

What image do the institute's researchers have of you?

F.T.: They see us as developers. *(Laughs)* They see us just as people who have contracts relating to industrial projects and who work on them. But we do more than that.

J.M.: Yes, it's true that we do have the image of living in a bubble, but we are trying to get away from that. Each year we organise courses on aspects of software, new programming languages, new tools, etc.



Johnny Mariéthoz

What's the best moment in programming?

F.T.: At the end, when the program works.

J.M.: It's when, after two days of research, you find the source of the problem. It's a great feeling. It's similar to the feeling of walking for several hours and then reaching the summit and suddenly seeing a breathtaking view.

In summary, you need to be persevering to be in this profession?

F.T.: Yes. You have to be.

J.M.: If you're not, you would give up this job instantly.



NEW EMPLOYEES AND EMPLOYEES LEAVING

In 2007, twenty-five new talents joined Idiap's team, whilst fourteen left to take up new challenges elsewhere in the world. Among the administrative personnel, Mrs Micheloud took up her position as Financial Director on 1st February 2007, replacing Mr Dal Pont, who has retired.

THEY ARRIVED IN 2007

(First name, last name, position, origin)

Venkatesh Bala Subburaman, Research Assistant, India
Cédric Dufour, System Administrator, Switzerland
Katayoun Farrahi, Research Assistant, Canada
François Fleuret, Senior Research Scientist, France
Nicolas Fremaux, Research Assistant, Switzerland
Sri Venkata Surya Sivaramakrish Garimella, Research Assistant, India
Philip Garner, Research Scientist, England
Hayley Shi-Wen Hung, Postdoc, England
Alejandro Jaimés, Scientific Manager, Columbia
Dines Babu Jayagopi, Research Assistant, India
Joseph Keshet, Postdoc, Israel
Kenichi Kumatani, Research Assistant, Japan
Stéphanie Lefèvre, Research Assistant, France
Jie Luo, Research Assistant, China
Mathew Magimai Doss, Research Scientist, India
Christine Marcel, Development Engineer, France
Sandra Micheloud, Financial Director, Switzerland
Xavier Naturel, Postdoc, France
Radu-Andrei Negoescu, Research Assistant, Romania
Francesco Orabona, Postdoc, Italy
Sree Hari Krishnan Parthasarathi, Research Assistant, India
Andrei Popescu-Belis, Senior Research Scientist, France / Romania
Anindya Roy, Research Assistant, India
Hugues Salamin, Research Assistant, Switzerland
Samuel Thomas, Research Assistant, India
Tamara Tosic, Research Assistant, Serbia

THEY LEFT

(First name, last name, position, origin, arrived)

David Barber, Senior Research Scientist, England, 2004
Samy Bengio, Senior Research Scientist, Canada, 1999
Le Chen, Research Assistant, China, 2006
Pierre Dal Pont, Financial Director, Switzerland, 2001
Cristina De Negueruela, Research Assistant, Spain, 2006
Wanjun Jin, Research Assistant, China, 2006
Agnès Just, Research Assistant, France, 2002
Guillaume Lathoud, Research Assistant, France, 2002
Eileen Lew Yi Lee, Research Assistant, China, 2005
Florent Monay, Research Assistant, Switzerland, 2002
Pedro Quelhas, Research Assistant, Portugal, 2002
Kevin Smith, Research Assistant, USA, 2002
Jithendra Vepa, Postdoc, India, 2004
Pierre Wellner, Senior Research Scientist, USA, 2002
Dong Zhang, Research Assistant, China, 2003

HONOURS, COMPLETED THESES

Honours



Each year, Idiap awards two prizes to its PhD students. The first rewards research and the second a publication.

In order to award the Idiap Research prize, the candidate is assessed by an in-house commission on the basis of five criteria: his publications, participation in the team, involvement in the project, communication skills and autonomy. For the Publication prize, an initial selection is made by senior members of the institute from among the works mainly written by an Idiap PhD student. Three external persons then grade the works chosen, separately and anonymously.

In 2007, the Research prize was awarded to Pierre Ferrez.
The Publication prize was not awarded.

Completed theses

Almost half of the scientists who work at Idiap are PhD students. They generally spend four years there and complete their stay by writing a thesis. This year, fourteen new students joined the institute, and ten left. Five of them completed their thesis under the joint supervision of Idiap and EPFL (Ecole polytechnique fédérale de Lausanne) researchers.

- **Learning the Structure of Image Collections with Latent Aspect Models**
Florent Monay, 14 February 2007
Thesis directors: Prof. Hervé Bourlard, Dr Daniel Gatica-Perez (co-director)
Members of the Thesis Committee: Dr Marco Mattavelli, Dr Stéphane Marchand-Maillet, Prof. Jean-Philippe Thiran, Dr Tinne Tuytelaars
- **Joint Head Tracking and Pose Estimation for Visual Focus of Attention Recognition**
Silèye Ba, 29 March 2007
Thesis directors: Prof. Hervé Bourlard, Dr Jean-Marc Odobez (co-director)
Members of the Thesis Committee: Prof. Juan Mosig, Prof. Jean-Philippe Thiran, Dr Rainer Stiefelhagen, Prof. Manja Pantic
- **Bayesian Methods for Visual Multi-Object Tracking with Applications to Human Activity Recognition**
Kevin Smith, 27 April 2007
Thesis director: Prof. Hervé Bourlard, Dr Daniel Gatica-Perez (co-director)
Members of the Thesis Committee: Prof. Juan Mosig, Dr James Ferryman, Dr Patrick Pérez, Prof. Jean-Philippe Thiran
- **Scene Image Classification and Segmentation with Quantized Local Descriptors and Latent Aspect Modeling**
Pedro Quelas, 27 July 2007
Thesis directors: Prof. Hervé Bourlard, Dr Jean-Marc Odobez (co-director)
Members of the Thesis Committee: Prof. Juan Mosig, Prof. Bernt Schiele, Dr Nicu Sebe, Prof. Pierre Vandergheynst
- **Error-Related EEG Potentials in Brain-Computer Interfaces**
Pierre Ferrez, 25 October 2007
Thesis director: Prof. José del R. Millán
Members of the Thesis Committee: Prof. Juan Mosig, Prof. Fabio Babiloni, Prof. Aude Billard, Prof. Klaus-Robert Müller



F I N A N C E S



OPERATING ACCOUNTS

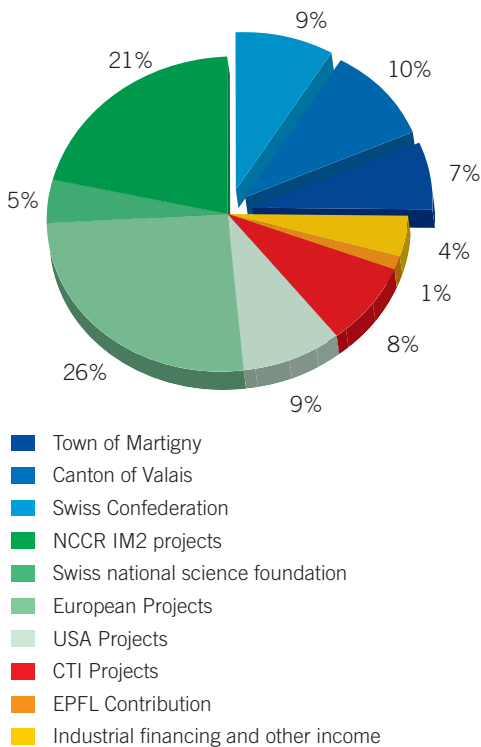
| (Swiss Francs) | 2006 | 2007 | % |
|---|------------------|------------------|----------------|
| INCOME | | | |
| Town of Martigny | 557,500 | 527,500 | 6.73% |
| Canton of Valais | 800,000 | 800,000 | 10.20% |
| Swiss Confederation | 456,000 | 688,000 | 8.77% |
| Loterie romande | 150,000 | - | |
| NCCR IM2 projects | 1,608,539 | 1,628,298 | 20.76% |
| Swiss national science foundation | 545,685 | 359,067 | 4.58% |
| European Projects | 2,679,875 | 2'041,256 | 26.03% |
| USA Projects | | 708,477 | 9.03% |
| CTI Projects | 116,608 | 644,928 | 8.22% |
| EPFL Contribution | 112,000 | 112,000 | 1.43% |
| Industrial financing and other income | 791,348 | 332,552 | 4.24% |
| TOTAL INCOME | 7,817,555 | 7,842,078 | 100.00% |
| EXPENSES | | | |
| Personnel expenses | 5,163,600 | 6,049,799 | 77.15% |
| Training and travel | 397,513 | 448,011 | 5.71% |
| Third party expenses | 451,926 | 535,164 | 6.82% |
| Office equipment and supplies ¹ | 40,444 | 37,693 | 0.48% |
| Computer equipment and maintenance ¹ | 452,341 | 42,239 | 0.54% |
| Administrative costs | 78,303 | 89,910 | 1.15% |
| Consulting and honoraria | 55,397 | 53,448 | 0.68% |
| Promotion and communication | 86,688 | 63,604 | 0.81% |
| Rent | 366,416 | 512,436 | 6.53% |
| Moving expenses | - | 50,409 | 0.64% |
| Amortizations | 16,084 | 108,120 | 1.38% |
| Other provisions | 500,000 | 40,000 | 0.51% |
| Miscellaneous | 13,129 | 2,710 | 0.03% |
| TOTAL EXPENSES | 7,621,841 | 8,033,544 | 102.44% |
| OPERATING PROFIT / LOSS | 195,714 | -191,466 | -2.44% |

¹ As of 2007, these entries are subject to investments depreciated on an annual basis (Cf. balance sheet p. 31)



SOURCES OF FUNDS / COSTS / COMMENTS

Breakdown financing



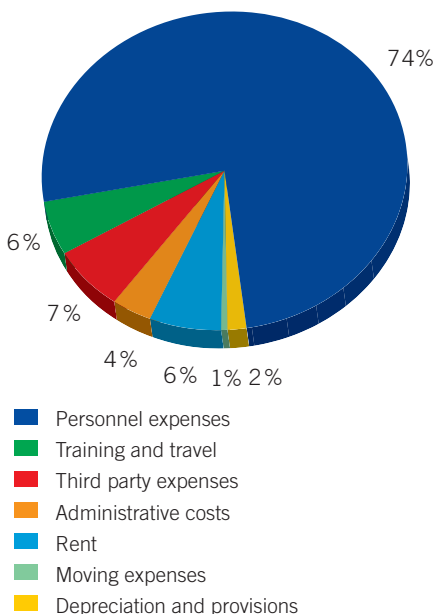
Comments on the 2007 accounts

Despite a solid situation, illustrated by the high number of projects in progress – or recently acquired –, Idiap ended the 2007 financial year with an operating loss of approximately 200,000 Swiss francs. Although projects cover the direct costs that they generate, on the other hand the institute's overheads still suffer from a lack of financing, which has an effect on the final statement. The Swiss Confederation's recent decision to substantially increase its basic contribution will enable balance to be restored as of the 2008 financial year.

The total amount of revenue is practically the same as that of last year. In 2007, expenses rose by more than 400,000 Swiss francs. This increase is mainly due to the influx of new employees. The 2006 report stated that, "For a good proportion of 2006 Idiap was greatly understaffed". In 2007 this situation was partially corrected. The rise in expenses is also explained this year by the move to Centre du Parc. Infrastructure costs (rent and charges), which are now greater, need to be added to the cost of the operation.

As of the 2007 financial year, a new method of depreciation was introduced for large computer hardware and equipment, which is shown in the balance sheet.

Expenses



BALANCE SHEET

(Swiss Francs)

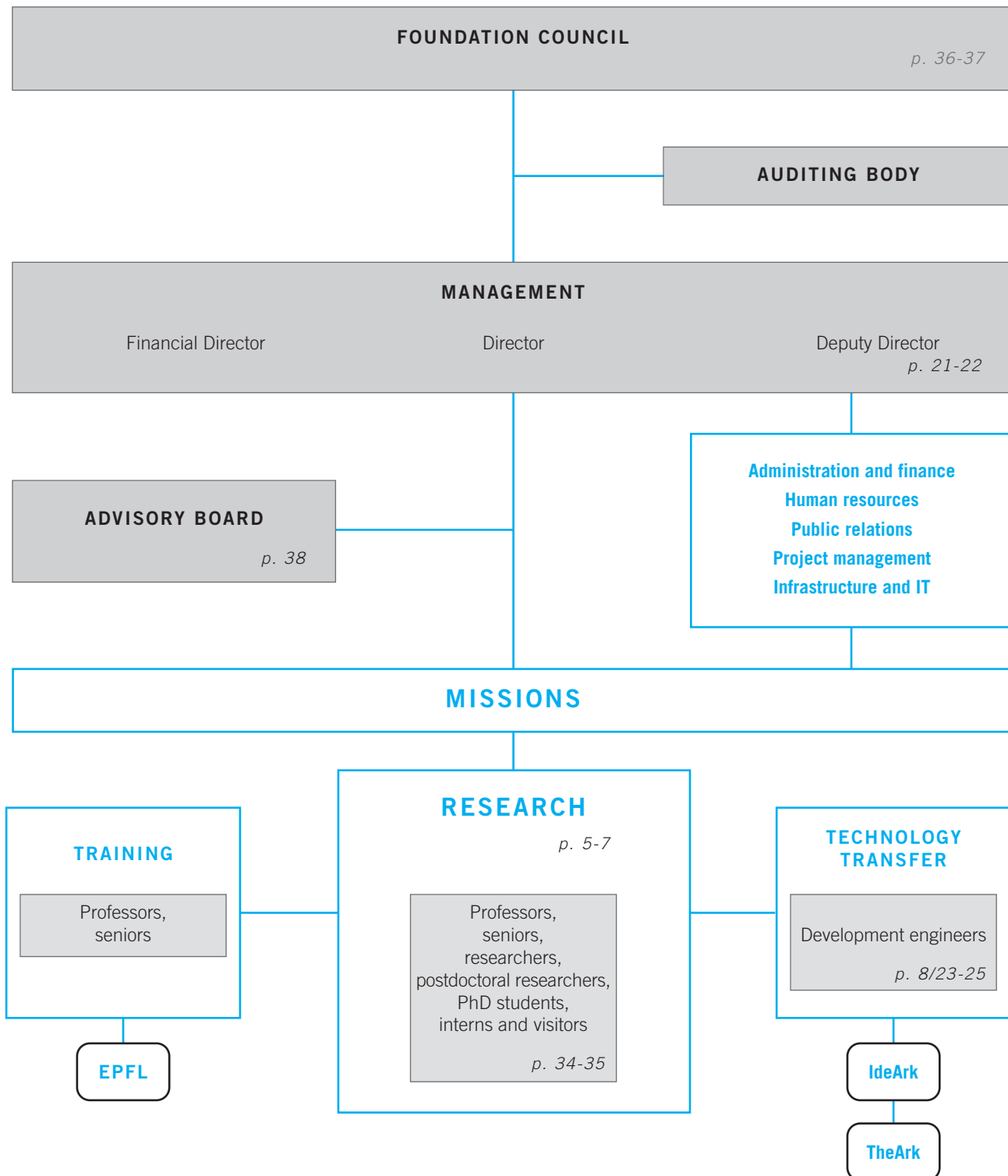
| | 31.12.2006 | 31.12.2007 |
|---------------------------------|---------------------|---------------------|
| ASSETS | | |
| Cash | 3,246,065.00 | 1,636,232.06 |
| Accounts receivable | 5,060.81 | 9,077.64 |
| Accrued income and other | 1,121,544.91 | 1,465,545.11 |
| TOTAL CURRENT ASSETS | 4,372,670.72 | 3,110,854.81 |
| Equipment | 11,952.00 | 314,585.60 |
| Financial assets | 50,001.00 | 50,001.00 |
| TOTAL NON-CURRENT ASSETS | 61,953.00 | 364,586.60 |
| TOTAL ASSETS | 4,434,623.72 | 3,475,441.41 |
| LIABILITIES | | |
| Accounts payable | 499,153.93 | 398,856.43 |
| Accrued expense | 2,705,282.60 | 2,197,863.73 |
| Provisions | 990,000.00 | 830,000.00 |
| TOTAL FOREIGN FUNDS | 4,194,436.53 | 3,426,720.16 |
| Share capital | 40,000.00 | 40,000.00 |
| Retained earnings | 4,473.10 | 200,187.19 |
| Net income | 195,714.09 | -191,465.94 |
| TOTAL OWN FUNDS | 240,187.19 | 48,721.25 |
| TOTAL LIABILITIES | 4'434'623.72 | 3'475'441.41 |



ORGANISATION



STRUCTURE AND MISSIONS



EMPLOYEES

Scientific staff

(First name, last name, position, origin, arrived)

Guillermo Aradilla Zapata, Research Assistant, Spain, 2004
Silèye Ba, Research Scientist, Senegal, 2002
Venkatesh Bala Subburaman, Research Assistant, India, 2007
Nicolas Bourdaud, Research Assistant, France, 2006
Hervé Bourlard, Director, Belgium, 1996
Barbara, Caputo, Senior Research Scientist, Italy, 2005
Ricardo, Chavarriaga, Research Scientist, Columbia, 2006
John Dines, Senior Research Scientist, Australia, 2003
Katayoun Farrahi, Research Assistant, Canada, 2007
Sarah Favre, Research Assistant, Switzerland, 2006
Pierre Ferrez, Research Assistant, Switzerland, 2004
François Fleuret, Senior Research Scientist, France, 2007
Mike Flynn, Senior Research Scientist, England, 2003
Nicolas Fremaux, Research Assistant, Switzerland, 2007
Ferran Galan Moles, Research Assistant, Spain, 2006
Sriram Ganapathy, Research Assistant, India, 2006
Sri Venkata Surya Sivaramakrish Garimella, Research Assistant, India, 2007
Gangadhar Garipelli, Research Assistant, India, 2006
Philip Garner, Senior Research Scientist, England, 2007
Daniel Gatica-Perez, Senior Research Scientist, Mexico, 2002
David Grangier, Research Assistant, France, 2003
Hynek Hermansky, Senior Research Scientist, United States, 2003
Guillaume Heusch, Research Assistant, Switzerland, 2005
Hayley Shi-Wen Hung, Postdoc, England, 2007
Alejandro Jaimes, Scientific Manager, Columbia, 2007
Dines Babu Jayagopi, Research Assistant, India, 2007
Joseph Keshet, Postdoc, Israel, 2007
Hamed Ketabdar, Research Assistant, Iran, 2004
Kenichi Kumatani, Research Assistant, Japan, 2007
Stéphanie Lefèvre, Research Assistant, France, 2007
Weifeng Li, Postdoc, China, 2006
Andrew W. Lovitt, Research Assistant, United States, 2006
Jie Luo, Research Assistant, China, 2007

Mathew Magimai Doss, Research Scientist, India, 2007
Sébastien Marcel, Senior Research Scientist, France, 2000
Bertrand Mesot, Research Assistant, Switzerland, 2004
José del R. Millán, Senior Research Scientist, Spain, 2002
Petr Motlicek, Postdoc, Czech Republic, 2005
Xavier Naturel, Postdoc, France, 2007
Radu-Andrei Negoescu, Research Assistant, Romania, 2007
Jean-Marc Odobez, Senior Research Scientist, France / Switzerland, 2001
Francesco Orabona, Postdoc, Italy, 2007
Jean-François Paiement, Research Assistant, Canada, 2004
Sree Hari Krishnan Parthasarathi, Research Assistant, India, 2007
Joel Praveen Pinto, Research Assistant, India, 2005
Andrei Popescu-Belis, Senior Research Scientist, France / Romania, 2007
Anindya Roy, Research Assistant, India, 2007
Hugues Salamin, Research Assistant, Switzerland, 2007
Nicolas Scaringella, Research Assistant, Italy, 2006
Samuel Thomas, Research Assistant, India, 2007
Tamara Tasic, Research Assistant, Serbia, 2007
Deepu Vajayasanen, Research Assistant, India, 2006
Fabio Valente, Postdoc, Italy, 2005
Alessandro Vinciarelli, Senior Research Scientist, Italy, 1999
Jian Yao, Postdoc, China, 2006

Development engineers

Philip Abbet, Development Engineer, Switzerland, 2006
Olivier Bornet, Senior Development Engineer, Switzerland, 2004
Maël Guillemot, Development Engineer, France, 2002
Johnny Mariéthoz, Development Engineer, Switzerland, 1998
Christine Marcel, Development Engineer, France, 2007
Olivier Masson, Development Engineer, Switzerland, 2002
Yann Rodriguez, Development Engineer, Switzerland, 2002

Administrative staff

Céline Aymon Fournier, Public Relations, Switzerland, 2004
Frank Crittin, Industrial Relations, Switzerland, 2004
Jean-Albert Ferrez, Deputy Director, Switzerland, 2001
François Foglia, Program Manager, Switzerland, 2006
Edward Gregg, Financial Assistant, United States, 2004
Sandra Micheloud, Financial Director, Switzerland, 2007
Sylvie Millius, Secretary, Switzerland, 1996
Nancy-Lara Robyr, Program Manager, Switzerland, 2003
Nadine Rousseau, Secretary, Switzerland, 1998

System engineers

Tristan Carron, System Administrator, Switzerland, 2003
Bastien Crettol, System Administrator, Switzerland, 2005
Norbert Crettol, System Administrator, Switzerland, 2002
Cédric Dufour, System Administrator, Switzerland, 2007
Frank Formaz, System Manager, Switzerland, 1998
Vincent Spano, Webmaster, Switzerland, 2004

Trainees

Idiap trainees generally spend between three and ten months at the research institute. Some are students at EPFL (Ecole polytechnique fédérale de Lausanne) and do this work placement as part of their degree work. Others come as part of student exchange programmes set up within European projects in which Idiap participates.

| | |
|-----------------------|----------------|
| Cedric Gaudard | Switzerland |
| Laurent Uldry | Switzerland |
| Xavier Perrin | Switzerland |
| Jie Luo | China |
| Mirko Hannemann | Germany |
| Leonidas Georgopoulos | Greece |
| Zacharie De Greve | Belgium |
| Leucio Cutillo | Italy |
| Weina Ge | China |
| Raphaël Snitzman | France |
| Tatiana Tommasi | Italy |
| Muhammad Ullah | Pakistan |
| Anh Thu Nguyen | Vietnam |
| Lucas Matena | Czech Republic |

Visitors

Visitors are researchers or representatives of Industry who only spend a few days or weeks at the institute, some to strengthen inter-institutional links and others to get an insight into the work carried out by the institute.

| | |
|---------------------|--|
| Yves Grandvalet | Université de technologie de Compiègne (UTC), France |
| Charles Anderson | Colorado State University, United States |
| Keith Bush | Colorado State University, United States |
| James Knight | Colorado State University, United States |
| Yegnanarayana Bayya | International Institute of Information Technology (IIIT), Gachibowli, India |
| Prasanna Sompura R. | Indian Institute of Technology (IIT), Guwahati, India |
| Iain McCowan | Commonwealth Scientific and Industrial Research Organisation (CSIRO) e-Health Research Centre, Australia |



FOUNDATION COUNCIL



Idiap has the legal status of a foundation. Therefore, the Foundation Council is its governing body. It is responsible for the economic and financial management of the research institute, defines its structures, appoints its Director, and generally ensures that the foundation develops successfully by defending its interests. The Foundation Council currently consists of twelve members from Valais and Switzerland with scientific, economic, academic or political backgrounds. Members of the Council are elected for four years and meet two to three times per year.

M. Stefan Bumann

Head of tertiary sector training,
Department of education, culture and sports (DECS)

M^e Pierre Crittin

Notary

M. Josy Cusani

President of CimArk SA

Dr Bertrand Ducrey

Director of Debio Recherche pharmaceutique SA

M. Daniel Forchelet

Swisscom Innovations

M. Olivier Dumas, President

Mayor of the town of Martigny

M. Jean-Daniel Antille, Vice-president

Manager of the regional office for the economic development
of French-speaking Valais

M. Jean-Pierre Rausis, Secretary

Managing Director of BERSY Consulting

M. Jean-René Germanier

National Councillor

Prof. Jean-Jacques Paltenghi

Inter-institutional relations delegate,
Ecole polytechnique fédérale de Lausanne (EPFL)

Prof. Christian Pellegrini

Director of the IT department,
University of Geneva (not in the photo)

Prof. Martin Vetterli

Vice-president for international relations,
Ecole polytechnique fédérale de Lausanne (EPFL)



Jean-Daniel Antille

Head of the Regional office for economic development in French-speaking Valais
Vice-President of the Foundation Council since 2005

"While we used to occupy premises in the town of Martigny, we took advantage of Idiap's move to set up new premises with them in the west wing of Centre du Parc. This cohabitation is stimulating for our small team of three people. Here there is an atmosphere of creation and openness with the outside world. Technology transfer is of great importance at the institute and we enjoy this dynamic environment because we also play an intermediary role."

Supported by the Department of economy and territory, the Regional office for economic development in French-speaking Valais is at the service of the canton's companies. Its team consistently makes courtesy visits to company owners in order to listen to their needs, their expectations, their difficulties, and more generally to keep track of changes in the economy. The Regional office regularly organises conferences on topical subjects. It is in this context that it offers for example to support business people in the event of inheritance. Also aware of the promotional effort that must be made, once a month it presents a company or sector of activity as part of the "Carrefour des entreprises" (Company Forum) programme on the airwaves of Rhône FM. It also sometimes plays the role of project coordinator, or even mediator in delicate situations. At the moment, the Regional office is working on a promising project – the application of industrial ecology, particularly by means of the reuse by certain companies of the energy released by others, since today energy balance is an important factor in competitiveness. After an initial diagnostic phase, the experiment will begin with some pilot companies.



Jean-René Germanier

National Councillor
Member of the Foundation Council since 2004

"Research is a state of mind and the temperature of a parliament can be gauged by the support that it grants to research. It is essential that politicians consider it a priority. I have always been one of those who vote in favour of granting funds, despite budget restrictions. Without research, and of course innovation, the economy goes into decline. Scientific circles must be able to work without having to always provide proof of a direct application, because it is often during fundamental research that the greatest discoveries are made. For Valais, a peripheral canton, this is an opportunity to retain an institute such as Idiap. Situated on the cutting edge of global research, it is a tremendous catalyst for a dynamic economy, and its method of working in a network is in line with its modern outlook on research."



INTERNATIONAL ADVISORY BOARD

The international strategic committee is comprised of members of the scientific community chosen by Idiap's management for their exceptional skills and avant-garde outlook. Although their role is strictly advisory, their support and advice is frequently sought and often proves to be invaluable when making decisions on matters of research, training and technology transfer.

Prof. Christopher M. Bishop

Assistant Director
Microsoft Research, Cambridge, UK

Prof. James Flanagan

Board of Governors Professor Emeritus
Rutgers University, Piscataway, USA

Prof. Nelson Morgan

Director, International Computer Science Institute (ICSI)
Professor, University of California at Berkeley, USA

Dr David Nahamoo

Speech CTO & Strategist
Senior Manager, Human Language Technologies
IBM Research, New York, USA

Prof. Bayya Yegnanarayana

Professor and Microsoft Chair, International Institute of Information
Technology (IIIT) Hyderabad, India

Prof. Steve Young

Head of Information Engineering Division
Engineering Department, Cambridge University, UK

Dr HongJiang Zhang

Managing Director
Advanced Technology Center, Microsoft Research
Beijing, China

Dr Jordan Cohen

Senior Scientist, SRI International
Menlo Park, CA, USA



MAIN PARTNERS

TOWN OF MARTIGNY

CANTON OF VALAIS

SWISS CONFEDERATION

State Secretariat for Education and Research (SER)
The Innovation Promotion Agency (CTI)



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www.swisscom.com



Swiss Power Group.

www.groupemutuel.ch



www.epfl.ch



www.theark.ch



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