Summary

The RENATER Group ................. 2
Foreword ................................ 3
RENATER, the network .......... 4
- Mainland .......................... 5
- Ile-de-France ................. 6
- Overseas ...................... 7

RENATER, services ............... 10
- Network services ........... 10
- Application services ....... 13
- Security of IT Systems ...... 15

RENATER, projects partner .... 16

RENATER, the users .......... 18

RENATER, innovation ........... 19

RENATER, the external relations .. 20

RENATER, the team .......... 22

RENATER, the administrators .... 23

RENATER, the financial report .... 24
RENATER, the French National Telecommunications Network for Technology, Education and Research, was deployed in the early 90s to federate telecommunication infrastructures for research and education. To carry out this task, the public interest group RENATER was formed in February 1993.

Member organisations of the RENATER are the Ministry of National Education, Higher Education and Research and large research organisations, CNRS, CPU, CEA, INRIA, CNES, INRA, INSERM, ONER, CIRAD, IRSTEA, IRD and BRGM.
During the year 2011, the GIP RENATER has encountered important changes both at the level of its structural evolution and at the level of its direction and of its governance.

In September, I had the honor to take up my position as director of the GIP RENATER.

The board of Directors was partially renewed in December, 2011 by electing Jean-Pierre Finance as president and by welcoming two new experts Jean-Pierre Verjus and Isabelle Morel.

During the first half of the year, The “Comité Réseaux des Universités” (Universities Networking Committee), some members of the Network Unit of the CNRS (National Center for Scientific Research) and the team in charge of the “Réseau Académique Parisien” (Parisian Academic Network), came to join the RENATER teams.

The strengthening of the technical team had the effect of widening our range of services and our offers in terms of mutualization and adaptability to meet the needs ceaselessly growing of our users.

Beyond providing NETWORK and SERVICES to its community of users, RENATER promotes the work of researchers and helps knowledge transfer towards other fields.

RENATER is also going to concentrate its action in the mutualization of the services of communication and needs linked to the cloud computing.

I accepted this new challenge with pride and determination and made a commitment to continue to provide to our users a service of very high availability, innovating and always more secured.

Patrick DONATH, Director
Deployed in the early 90s, the National Telecommunications Network for Technology, Education and Research, RENATER, provides national and international connectivity via the GÉANT network, IP transit and SFINX (a IXP managed by RENATER) to more than 1,300 sites of educational and research institutions in Metropolitan France and in the overseas territories, amounting to 160,000 researchers and 2.2 million students.
RENATER, metropolitan France

- An architecture based on dark fibre and DWDM equipment.
- The widespread use of 10 Gigabit Ethernet in networks.
- A complete mesh of all network points of presence.
- The ability to meet the very high speed requirements of major research projects by establishing end to end optical paths.

Some figures
- 11,900 km of dark fiber
- 120 links
- 72 PoPs (NR for « Nœud RENATER »)
- 125 wavelengths at 10Gbps

2011

Two 10GE wavelengths were added between Paris and Lyon to help meet the increased traffic.

Between the NR of Nantes, Angers and Le Mans, 1 Gbps links were replaced by 10 Gbps circuits.

Connecting CINES to DEISA
As part of an international collaboration between the supercomputing centres, RENATER provided a circuit with a capacity of 10 Gbps to connect CINES (National Computer Centre for Higher Education) to DEISA (Distributed European Infrastructure for Supercomputing Applications).

Recovery and extension of the network in the PACA region
To anticipate the end of the SHERPAA network, the RENATER Group, in partnership with the universities of Avignon, Toulon and Nice, deployed an infrastructure in the South East of France region based on existing PoPs in Marseille, Sophia and Cadarache, and in four new PoPs in Marseille, Avignon, Nice and Toulon. Six new links at 10 Gbps were deployed.
The RENATER network connects 25 points of presence in Ile de France. Most links are at 10 Gbps. Since January 7, 2011, the UPMC (Université Pierre et Marie Curie) has delegated project management of RAP (Paris Academic Network) to the RENATER Group.

The RAP network is dedicated to Parisian higher education research institutions and is made up of five points of presence and a double supply to RENATER (2x10 Gbps). The RAP infrastructure connects 160 sites belonging to 64 institutions, totalling more than 350,000 users (students, professors and researchers).

2011

- **Two 10 GE wavelengths** were added between the two international RENATER PoPs Paris1 and Paris2.

- **On RAP, two new L3VPNs were deployed**, one for INSERM, as part of the deployment within the institution of a national ToIP service and the second for CNOUS.

http://www.rap.prd.fr
Connecting departments and communities overseas

Territorial continuity is very important and connecting departments and communities overseas is one of the major missions of the RENATER Group.

Martinique, Guadeloupe, French Guiana

Martinique and Guadeloupe are connected to RENATER via a virtual private network (VPN) of 34 Mbps. French Guiana is connected at the same speed to the mainland via a 24 Mbps L3VPN access and a L2VPN access at 10 Mbps. Moreover, Guadeloupe and Martinique access the Internet at 50 Mbps each. For French Guiana, Internet access is 10 Mbps. The CNES site in Kourou has a specific infrastructure of 4x2Mbps between Kourou and the mainland.

New Caledonia

An submarine cable now links New Caledonia to Australia. RENATER Internet connectivity in New Caledonia is at 30 Mbps, complemented by a Paris-Noumea link at 4 Mbps.

Mayotte

Mayotte is connected to the mainland through a VSAT solution based on a VPN with a 2 Mbps speed.

French Polynesia

The University of French Polynesia is still connected at 128 Kbps to the mainland.

Reunion Island

The interconnection speed between Reunion Island and the mainland has been significantly increased. It is now 2x155 Mbps over two links, one passing through East Africa (via India) and the other to the West (via England).

These two links, differentiated from end to end, arrive via two separate routers to Reunion, in terms of network topology, the Reunion NR is now integrated in a loop connecting it to Paris and Marseille.

This new architecture allows for the use of IPv6 and the implementation of "QoS" with the establishment of mechanisms for Google and Akamai caches.
RENATER, international links

Overall European and international connectivity with other Education and Research networks

The GÉANT network (Gigabit European Advanced Network Technology) and the associated activities programme (GN3) are co-financed by the EU under the 7th Framework Programme and the NRENs.

The GN3 project is a collaboration between 32 networks for Education and Research in Europe (NRENs) including RENATER for France. DANTE (Delivery of Advanced Network Technology to Europe) is coordinating the project and operates the GÉANT network, and TERENA (Trans European Research and Education Networking Association) is involved in dissemination. Through the NRENs, the pan-European GÉANT network provides connectivity and a range of services to 40 million users located in over 8000 institutions in 40 countries.

In 2011, it should be noted, a new access for GÉANT was implemented in Geneva, thus increasing access to the LCHONE network (Large Hadron Collider Open Network Environment) for French users.

RENATER is interconnected to GÉANT:
- 10 Gbps for IP traffic and 10 Gbps for backup (via the Strasbourg-Kehl cross-border fibre with the German NREN, DFN)
- 10 Gbps for the LOFAR project
- 10 Gbps for DEISA and PRACE projects
- 10 Gbps for European research projects: Project GEYSER, link at 1 Gbps to PSNC (Polish NREN)
- 10 Gbps between the RENATER node in Geneva and GÉANT
Cross-border links

The national connectivity is completed by:

A cross-border link between Strasbourg and Kehl (Germany)
Since 2007, this 10 Gbps link has allowed for the direct interconnection of RENATER with its german counterpart, X-WIN by DFN.

A link between Nancy and Esch/Alzette (Luxembourg)
In 2010, an dark fiber cross-border link was put in service between the NR in Nancy and the Esch/Alzette site in Luxembourg for the IOT@ project.
Two 10Gbps optical circuits were activated on this link: one for Grid5000 and one to allow IP traffic to RESTENA (NREN of Luxembourg) and for the French border sites.

Access to the Internet

IP transit
RENATER has two access points to general Internet, one in Paris and one in Marseille.

2011

Following the tender and as part of the renewal of contracts for IP Transit, the capacity and reliability of transit have been increased over both general Internet access points. In Paris, the capacity was increased from 10 to 20Gbps on NR Paris1 with the redundancy of NR Paris2 via a link aggregation with a total capacity of 20Gbps on each site. The same architecture has been implemented in Marseille to provide a capacity of 10Gbps on NRs of Marseille1 and Marseille2.

The SFINX
SFINX is an IXP (Internet eXchange Point) operated by RENATER. Created in 1995, at the beginning of the Internet, SFINX was one of the first IXPs in France. Its objective is to optimise Internet traffic in France, in complete neutrality for all market stakeholders. The SFINX is deployed over two points of presence (POP) in Paris and suburbs. These POPs are interconnected with 10 Gigabit Ethernet links.

2011

In 2011, among those connected to SFINX, 95 ISPs requested an upgrade of their access interface up to 10 Gbps. Following the implementation of the two route-servers, more than half of the ISPs have sought to benefit from this new service.
RENATER, services

Network services

Local Internet Registry
(IP addresses, domain names)

RENATER manages the services associated to network connection: IP address allocation, delegation of reverse zones and opening of .fr domain names.

Allocation of IPv4 and IPv6 prefixes
RENATER is a member of RIPE NCC, Regional Internet Registry (RIR), responsible for the management of IP resources in Europe and as an LIR (Local Internet Registry), RENATER can allocate IPv4 and IPv6 prefixes to its users.

http://www.renater.fr/adressesip

Opening of domain names
RENATER registers domain names for its users.

2011
RENATER was accredited by AFNIC as the registrar of «.fr» and «.re» subdomains.

For «prd.fr» RENATER is the registrar for all names declared in that namespace.

http://www.renater.fr/domaine

Creation and update of reverse zones
An establishment to which RENATER allocates a block of IP addresses will assign those addresses to hostnames. It is also necessary to make available the correspondence between a host name and its IP addresses, in both directions. This service is provided by RENATER.

http://www.renater.fr/zonesinverses

Provider of connectivity

RENATER provides a transport service for IPv4 and IPv6. RENATER connects more than 1,300 sites, of which more than one hundred are already connected in IPv6.

On top of unicast connectivity, RENATER provides a multicast service, available natively for both versions of the IP protocol (IPv4 and IPv6).

Multicast allows an optimal distribution of a flow from a source to a set of recipients with replication within the network.

Dedicated circuit solutions are available on RENATER. This offer is based on various technologies (MPLS, DWDM, etc.).

http://www.renater.fr/connectivite
VPN Service (Virtual Private Network)

The circuits offer (also known as VPNs) is available on RENATER. It includes point-to-point circuits, private interconnection service between two establishments, as well as multi-point circuits that allow interconnection within a private network of several sites via the RENATER backbone.

http://www.renater.fr/vpn

Voice and image services

EVO

EVO (Enabling Virtual Organizations) is a global video conferencing tool based on a set of servers called reflectors or pandas, providing signalling and routing flows generated by the application. RENATER hosts EVO reflectors. Thus, the whole RENATER community can carry out video conferences, able to bring together a large number of participants.

2011

- 1300 registered users in the RENATER community

http://www.renater.fr/evo

H323

Gatekeepers have been long since installed in RENATER backbone, allowing for H.323 video-conferencing between RENATER establishments. The RENATER service is interconnected to its counterpart in other research networks through the GDS system [Global Dialling Scheme].

http://www.renater.fr/h323

RMS

RENATER takes over the operation of the (Remote Meeting System) videoconferencing service operated previously by CC-IN2P3 and which was available for a limited number of RENATER users. Beginning in 2012, this conference bridge service can book, in 3 clicks, the resources to carry out a conference with several participants. The service will soon be available to all establishments connected to RENATER.

http://www.renater.fr/rms

ToIP

RENATER provides a service for interconnecting IPBXs in organisations that have deployed IP telephony within their campuses. A call router can route calls between sites using the IP infrastructure and thus reduces or even rids the costs of delivering these calls, and improves the convergence of voice and data. In 2012, RENATER will provide a comprehensive telephone service through a SIP trunk (Session Management Protocol) operator.

2011

- 26,000 telephone numbers routed

http://www.renater.fr/toip
... RENATER, network services

Mobility services

eduroam™
eduroam allows the mobile user to benefit from secure access to the Internet (WiFi) in all institutions that have deployed the service. Connection is simple and transparent (same login and password) between the user’s home institution and the hosting institution. User authentication is done by the home institution through a network of radius servers.

Around 300 RENATER sites use this service with more than 100,000 user accounts. The deployment of this service in around 40 networks for Research and Education provides international coverage.

eduspot, to simplify network access wireless for students

eduspot recommendations aim to simplify, at the national level, access to wireless network for users, within the walls of their institutions, but especially when visiting other institutions. eduspot is based on the Identity Federation as infrastructure for authentication and on a set of common practices. These recommendations are sent to higher education and research institutions for their visitors in addition to the eduroam infrastructure.

http://www.renater.fr/eduroam
RENATER, Application services...

**Education-Research Identity Federation**

The Identity Federation aims to make available an access control for digital resources online for a very large community of authenticated users. Through the mechanisms of the Identity Federation, organisations that make these resources available do not have to log thousands, even hundreds of thousands of users in order to control access. The end user is at the heart of the system, they can access their resources remotely from outside their facility using their usual authentication method.

This service will soon be part of Edugain, in the frame of GN3 project. It opens the Education-Research Federation to the inter-federation.

- 135 Education-Research Identity Providers enrolled in with the Federation.
- 234 resources proposed.

**Electronic certificates (servers, personal)**

RENATER offers its community certificates that are automatically recognised by most software (web browsers, mail clients, smartphones...). These services are the French version of the contract signed between TERENA and Comodo, the Certification provider, for the benefit of around twenty national higher education and research networks in Europe, including RENATER. These certificates do not require any configuration on the client workstations.

**Server Certificates Service**

The Certificates (TCS) distributed are recognised by default in web browsers (Internet Explorer, Firefox/Mozilla/Netscape, Safari, Opera...). These certificates do not cause the appearance of a warning window and require no prior installation on client workstations of certificates certifying authority.

- 281 institutions use the service, for 10,299 TCS server certificates.

**Personal Certificates Service**

The TCS certificates offer expanded in late 2010 with the provision of personal certificates. These personal certificates allow people to sign emails. They also allow people to prove their identity during authentication.

- 19 institutions use this service, or 302 personal certificates.
... RENATER, Application services

Anti spam service

RENATER’s anti-spam service is offered to all institutions connected to the network (and thus RENATER license-holders). This service comes in the form of a shared inbox relay working upstream of the sites’ mail servers, carrying out a first level of spam filtering, and as an option, virus scanning for messages to users of connected sites.

Universalists/Metalists

Universalists is a hosting service for mailing lists based on a collection of virtual hosts based on the Sympa list engine. Although most institutions in our community has a Sympa server, there is a high demand for hosting thematic lists.

Other collaborative tools:
- Foodle: tool for making appointments.
- Wiki: web page associated with each mailing list.
- Survey: a tool for online surveys.

Sympa

Sympa is the mailing list software used by the vast majority of higher education and research institutions. This free software is developed under the responsibility of RENATER. It benefits from many contributions from private and public organisations.

SourceSup

SourceSup is a web platform for the management of projects in the education-research community. Hosted projects can be broadcast or publically or privately, so it can be both for inter-institutional projects and internal projects.
RENATER, Security of IT Systems

PSSI - the IT systems security policy

RENATER created in 2011 a team dedicated to the security of information for users of the RENATER network. This team works closely with the FSSI (Security of IT Systems Officer) from the Ministries of Education and Higher Education and Research, who serves as a relay to establishments.

Examples of activities:
- managing the RSSIs of higher education and research
- maintaining all generic PSSI documentation for higher education and research - technological and legal monitoring

RENATER CERT

The RENATER CERT supports any information, detection and assistance task relating to security incidents detected and reported on the RENATER network. The detection of certain events is made possible by the combined use of different tools, and in particular the metrology tools implemented on the network.

The preventive dimension of the RENATER CERT mission is primarily achieved by sending different types of newsletters to its correspondents in RENATER sites. Essentially this would be:

- To alert you about the discovery of security vulnerabilities in various software and equipment;
- To send a weekly newsletter summarising information about attacks observed, critical security vulnerabilities or of interest to RENATER community members.

2011

- A persistent presence on the network of a large number of computers infected by various virus threats and particularly, for many detections, by the Conficker worm.

http://www.renater.fr/securite
In 2010 and 2011, as part of the proposed metrological ultra-stable fibre link initiated by the LNE-SYRTE (Space-Time Reference System CNRS-UPMC-Paris Observatory) and LPL laboratories (Physics Laboratory Lasers-CNRS-Université Paris 13), simultaneous transfer tests of ultra-stable clock signals and digital data streams for the Internet were carried out on the RENATER production network.

Indeed, it was possible to transmit a clock signal by laser using the fibre optics of the RENATER production network, the transfer frequency is of a remarkable quality, despite the distance of over 500 km in fibres deployed in environments that can be very disturbed. These results allowed us to consider the implementation of a network to distribute an ultra-stable frequency to many French laboratories and could lead to many applications concerning the measurement of different fundamental constants, Molecular Spectroscopy of a very high precision, tests of variations in physical constants, atomic interferometry of high precision.

This is how the project REFIMEVE+ - METROLOGICAL FIBRE NETWORK FOR EUROPE + - was born and has been recognised for excellence in equipment as part of the tender campaign for a large loan. It will allow the distribution of the signal from the best clock in the world located at the Paris Observatory throughout the whole French territory without any performance degradation in information. The high performance offered by this project will supersede that of GPS by a factor of more than 100,000.

The project will result in the creation of unique giant testing loop in Europe which could provide a model for the field of fundamental physics and geodesy. The network leverages French investments in RENATER. It is a first step for the construction of a Europe-wide network with a proposed first extension to Germany with the support of the DFN (German academic network) and then relying on the DANTE European consortium in which RENATER takes part.

The fields of application are numerous. They affect many areas of fundamental research but also more applied areas such as clock synchronisation with several companies involved. Moreover, the construction of this equipment will provide an opportunity to transfer expertise in the direction of a French SME that could well open up a new international market.
Project GEYSERS

The objective of this project as part of the FP7 programme is to qualify providers of optical infrastructure and IP operators with a new, more efficient architecture to improve their business model.

INRIA is participating in this project and RENATER is providing the infrastructure to connect INRIA to various European partners over the GÉANT network. In 2011, a first level 2 1Gbps circuit between the Lyon INRIA site and the Polish partner PSNC was established. The second circuit should be established in 2012 between INRIA and a Spanish partner when our Spanish counterparts have upgraded their infrastructure to GÉANT+.  

Project LHCONE

The LHCONE project aims to set up a private network for Tier1/2/3 exchanges between the LHC project (Large Hadron Collider). RENATER participates actively in the development of LHCONE, a dedicated network for sites and participates in LHC experiments at CERN to provide connectivity at very high bandwidth for communication between Tier1 and Tier2 sites.

In France, the LHCONE network deployed by RENATER serves the computing centre of IN2P3, GRIF (Tier2 distributed in Ile-de-France), the Subatech site (Nantes) via a VPN service. The other Tier2 sites will be connected gradually.

France Grilles

France-Grilles offers innovative solutions for the exponential growth in storage requirements and processing data in many disciplines. France Grilles’ priorities are currently to ensure the quality of operations of the grid infrastructure, to improve services offered to users and to establish its roadmap for « cloud computing ».

At the national level, France-Grilles coordinates the deployment and operations of production grids by relying heavily on the RENATER network infrastructure and the various regional grids for multidisciplinary transparency and supporting scientific user communities.

RENATER connects 23 sites involving + 20,000 processors. For access to resources, the certification authority GRID-FR is operated by RENATER.
RENATER, the users

Training

**CiRen**
CiRen training is for users of the RENATER network and are organised at the CINES in Montpellier.

- CiRen 49 - Shibboleth.
- CiRen 50 - SeeVogh Technologies (eg. « EVO »).
- CiRen 51 - IPv6.

**TutoJRES**
Full-day training for tackling topics adapted to changing technologies.

- TutoJRES No. 15
  Tools & Collaboration Services.

Meetings with users

**RENATER is involved in these events:**

- **RUE 2011** - CNIT at La Défense on the 25 and 26 May 2011.
  4th Business-University ‘Rencontres’ event.

- **Carnot Meeting** - Double Mixte - Lyon on the 12 and 13 October 2011.
  Key R&D events for companies.

  JRES presents an overview of technologies, practices, strategy, organisation and development in the networking world, presenting innovative themes at each event. They bring together, every two years, those involved in the community for Higher Education Research, who contribute to the deployment and development of new information and communication technologies in higher education and research institutions.
  Late 2011, it has been decided that RENATER will organize next JRES events.

**JRES 2011**

- 1500 delegates.
- 100 speakers.
- 30 posters.
- 4 parallel sessions during 5 days.
  https://2011.jres.org/
RENATER, innovation

Participation in working groups

GCS (Service Consulting Group)

Created in January 2010, the GCS is involved in defining new services that RENATER could provide to the educational research community. The GCS consists of RENATER staff members appointed by their representatives on the board of the RENATER Group. The focus is on the evolution of existing services but also on the study of a collaborative messaging service, the development of IP telephony and videoconferencing, the problem of isolated sites of collection networks, etc. The working groups related to the GCS were implemented, drawing on the expertise of the RENATER community. GCS recommendations are passed on to the RENATER Board.

GN3 project

The GÉANT network and the activities programme associated GN3 are co-financed by the European Commission (FP7). The GN3 project partners are 32 European NRENs, DANTE and TERENA, and four other associated NRENs.

The RENATER Group participates in 5 research activities on topics of photonics, virtualisation, security, advanced monitoring and identity federation. This work is complemented by the operation of the Federation of Education Research and eduroam services. The RENATER Group is also involved in GÉANT through its participation in the executive committee of GN3 (EXEC), responsible for managing the project.

In addition to research activities conducted as part of GN3, the RENATER Group is involved in several technical bodies coordinating the operation of the European backbone. This is the case of the Access Port Manager (APM) group, which discusses the technical developments of GÉANT and suggests services to implement for the benefit of national research networks (NREN).

Deliverables in which RENATER teams have participated:
- JRA1-T2 « photonic switching », tests of 100G carried out in 2010 and the SYRTE experimentation conducted in 2011 on the RENATER production network. The documents were published in the final report DJ1.2.2 « State of the Art Photonic Switching Technologies ».
- JRA1-T4 « Current and Potential uses of Virtualization »: DJ 1.4.1.
AFNIC
The French Association for Internet Names in Cooperation, is a nonprofit organisation responsible for the administrative management of the domain names .fr (France) and .re (Reunion Island)

For over three years, the RENATER Group has participated in the work of the AFNIC scientific council, including defining and monitoring the activities of its R&D. DNSSEC and ONS are major themes, not only in talks, but also in ongoing experiments. RENATER is involved in consultative Registrar committees. RENATER director is member of AFNIC board.

http://www.afnic.fr/

RIPE
European IP Networks

The « European IP Networks » (RIPE) forum brings together operators and Internet service providers based in Europe. Organised by the European registry (RIPE NCC), the forum is organised into working groups, in which RENATER regularly participates - including for IPv6, DNS, Routing, Internet Exchange Points, Address Policy. This is also the place to meet with representatives of 4 other Internet registers, who present developments in their respective regions. Finally, common rules for Internet resource management are discussed.

http://www.ripe.net/ripe/

IETF
Internet Engineering Task Force

This is the standardisation meeting for Internet protocols. The RENATER Group participates in numerous working groups, including: IPv6, IPPM, PIM, L1, L2, L3-vpn, SIP, DNSop,... The goal is to keep abreast of developments and new standards being validated, to be able to develop the services that the RENATER Group can offer to the academic community. This technology monitoring work allows us to stay up to date for the tenders, that the RENATER group is required to carry out on a regular basis.

http://www.ietf.org

EuroIX
European Internet Exchange Association

The RENATER Group is a member of EuroIX to benefit from the expertise of its members in order to develop the services offered on SFINX. (See the implementation of two route servers, completed in January 2011).

http://www.euro-ix.net/
Relation with African NRENs

RENATER follows the developments of NRENs in Central and West Africa, and aims to help the emergence of these networks and to interconnect them with the community of European and World research.

Therefore in March 2011, RENATER and WACREN (Central and West African Research and Education Network) signed a partnership agreement.

This agreement is the first step towards a strong collaboration between the RENATER network and its counterparts in Central and West Africa, with the participation of CIRAD and IRD, French research organisations of the RENATER Group and having some locations in Central and West Africa.

http://www.wacren.net
RENATER, the team

From left to right: Laurent GYDÉ, Sabine JAUME-RAJONIA, Patrick DONATH and Sandra CABARET

Chairman of the board
Jean-Pierre FINANCE

Director
Patrick DONATH

Accountant
Sandrine GABOREL

Technical Branch
Laurent GYDÉ
Deputy: Bernard TUY

External relations branch
Sabine JAUME-RAJONIA

Administrative and financial branch
Sandra CABARET

Network engineering and infrastructure

Network Services operations & support

Middleware & end-users services

Infrastructure for IT Services

Information security

Relationship with partners

Relationship with users

Communication

Budgetary and administrative affairs

Human Resources

Call for tenders
RENATER, the administrators

Chairman of the Board of Directors
Jean-Pierre FINANCE

Government Commissioner
Philippe PERREY

General Economic and Financial Controller
Malika MOHA

MESR
Bernard CARRIERE
Susana GOTA-GOLDMANN

MEN
Jean CERVONI

CNRS
Jean-Marc VOLTINI

CPU
Yves LECOINTE

CEA
Louis ARRIVET

INRIA
Eric GAUTRIN

CNES
Claude LASSERRE

INSERM
Pierre DELORT

ONERA
Pierre MALECKI

CIRAD
Joël SOR

IRSTEA
Laurent VIGNERON

IRD
Gilles PONCET

INRA
Sylvie MOREAU

BRGM
Jean-Marc TROUILLARD

Qualified individuals
Isabelle MOREL, Officer Security of IT Systems.
Jean-Pierre VERJUS, Adviser to the President of INRIA.
RENATER, the financial report

Income

The RENATER Group funding is guaranteed up to 69% by contributions from signatories of the founding agreement of the Group. The other institutions connected to the network and/or receiving network access services contribute up to 26%. Operating subsidies represent 4% of income. They are mainly due to the involvement of RENATER in the GÉANT project and in various European projects.

For the financial year 2011, income is €22.6 million.

No investment subsidy was received by the Group in 2011.

<table>
<thead>
<tr>
<th>Overall funding</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member funding</td>
<td>69%</td>
<td>73%</td>
</tr>
<tr>
<td>Non-Member funding (including RAP)</td>
<td>26%</td>
<td>15%</td>
</tr>
<tr>
<td>Operating subsidies</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Miscellaneous income</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>Investment subsidies</td>
<td>0</td>
<td>4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-member funding</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other connected institutions</td>
<td>45%</td>
<td>89%</td>
</tr>
<tr>
<td>RAP/access network</td>
<td>48%</td>
<td>0%</td>
</tr>
<tr>
<td>IXP</td>
<td>7%</td>
<td>11%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subsidies</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe operating subsidy</td>
<td>81%</td>
<td>47%</td>
</tr>
<tr>
<td>Other body operating subsidy</td>
<td>19%</td>
<td>0%</td>
</tr>
<tr>
<td>Investment grants</td>
<td>0%</td>
<td>53%</td>
</tr>
</tbody>
</table>
External costs related to network operation represents 66% of costs, overheads and staff costs 20% and depreciation at 13%.

For the financial year 2011, costs are €22.1 million.

Capital expenditures are 6.2 million. They reflect the policy of IRU use (irrevocable rights of use) and are funded by payments from the funds made available for the renewal of the network.

---

### Expenses

**External costs related to network operation**

<table>
<thead>
<tr>
<th>Total costs</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation of the network</td>
<td>65%</td>
<td>70%</td>
</tr>
<tr>
<td>Overheads, excluding depreciation</td>
<td>20%</td>
<td>15%</td>
</tr>
<tr>
<td>Depreciation</td>
<td>13%</td>
<td>14%</td>
</tr>
<tr>
<td>Miscellaneous expenses</td>
<td>2%</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Operation of the network**

<table>
<thead>
<tr>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainland network</td>
<td>52%</td>
</tr>
<tr>
<td>DOM / TOM</td>
<td>18%</td>
</tr>
<tr>
<td>Local loops (including RAP)</td>
<td>15%</td>
</tr>
<tr>
<td>International</td>
<td>14%</td>
</tr>
<tr>
<td>IXPs</td>
<td>1%</td>
</tr>
<tr>
<td>Services</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Capital expenditure**

<table>
<thead>
<tr>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrevocable rights of use (IRU)</td>
<td>71%</td>
</tr>
<tr>
<td>Network equipment</td>
<td>24%</td>
</tr>
<tr>
<td>Others</td>
<td>6%</td>
</tr>
</tbody>
</table>