

## Stichting NLnet

## Annual Report 2010

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## Introduction by new Chair Governing Board

As the newly appointed chair of NLnet Foundation I have the privilege to provide you with some guiding words before you start browsing through this account of what happened at NLnet in 2010. To summarize, 2010 has again been a very rewarding year for the foundation - we were able to attract and support many successful new projects and standards efforts.

From charting the unreliable territory of the SSL universe<sup>1</sup> to contributing a new change tracking standard for OpenDocument Format<sup>2</sup> offering to revolutionize the document life cycle, from devastating security research on GSM<sup>3</sup> to developing the number one security plugin for browsers<sup>4</sup>, from exposing RFID insecurity<sup>5</sup> to truly protected real time communication software<sup>6</sup> - these and many more exciting things happened over the course of these last twelve months thanks to funding from NLnet foundation. There were some other notable events, such as our sponsorship of the organisation of the 78th IETF in The Netherlands and the signing of the root zone of the internet with DNSSEC this summer.

NLnet Lab's director Olaf Kolkman took part in the historic key signing ceremony in his role as chair of the Internet Architecture Board, a subtle recognition of our contribution which made us very proud.

Success has many fathers, it is often said. In this case it is true. To no small degree and without any doubt the success of NLnet is thanks to the continued efforts of my fellow board members Hans Onvlee, Jos Alsters and Mike Otten. They transformed NLnet foundation into the professional and well-organised charity it is today, with a good operational team, lightweight and fair procedures to select projects and they made tough decisions when they needed to be made. A significant personal investment on their part, as you can imagine - many evenings and weekends were sacrificed to make this happen.

Despite its modest scale, NLnet Foundation has become a strong force and a recognised player when it comes to challenge and patch the gaps and architecting the future of information technology in the areas it chooses to get involved in. That recognition is important for us, because we will be looking for donations from other stakeholders to fuel our work. Our own start up capital is finite, and in order to make a sustained effort we hope those that profit from the work we support will support us.

We like to think that we have an interesting offer to bring to the table. Our track record proves that the open and inclusive mechanism of NLnet is a very efficient way to do high quality crowd sourced innovation at a global scale. Our microgrants give the most creative and smartest minds of our generation the opportunity to contribute their. In 2010 we received donations from a number of companies such as Nokia and Comcast already, and we hope that others will follow suit. To that effect we will be setting up specific funds around key areas like real time communication, OpenDocument Format and DNSSEC. If you have

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- 1 EFF's SSL Observatory.
  - 2 Five related projects, see further Annex 1.
  - 3 GSM Security Project.
  - 4 NoScript Mobile.
  - 5 RFID Guardian.
  - 6 Blink, Jitsi (SIP-Communicator).

had positive results from work funded by NLnet, we encourage you to consider to chip in. If you want to see why, just read this annual report from front to back. I am very proud of the work we are doing at NLnet, and I look forward to an exciting future.

On behalf of the board,

Marc van Driel

## 1. NLnet organisation

- History** NLnet's history started in April 1982 with the announcement of a major initiative to develop and provide network services in Europe. The Netherlands Local Unix User Group (NLUUG) played a major role in raising the so-called pan-European "UNIX" Network, EUnet; to support these activities the NLUUG members founded NLnet. NLnet was formally established as a "stichting" (Dutch for foundation) on February 27, 1989 and was situated in Amerongen, the Netherlands until April 2007.
- Funding source** In November 1994, NLnet Holding BV was formed by the foundation in order to create a commercial base for its internet activities. NLnet Holding BV was the very first commercial Internet access provider in the Netherlands. The sale of NLnet's Internet Service Provider (ISP) activities to UUnet (now part of Verizon) in 1997 provided Stichting NLnet with the means to actively stimulate the development of network technology and to make this freely available to the community in its broadest sense. More and more funding for NLnet activities comes from external sources. Other commercial and non-for-profit organisations donate to NLnet when they see that the technology being fostered by NLnet is in line with their mission and market development expectations. NLnet is a recognized charity (Algemeen Nut Beogende Instelling) according to Netherlands legislation.
- Domicile** NLnet has its offices at Science Park Amsterdam, a technology hotspot with a long history of pioneering in network technology R&D in The Netherlands.
- Supervisory Board** The Supervisory Board (Raad van Toezicht) of Stichting NLnet consists of:
- Erik Esseling;
  - Erik Huizer, chair;
  - Kees Stuurman.
- These positions are non-remunerate positions in accordance with the NLnet Statutes.
- Governing Board** The Governing Board of Stichting NLnet consists of:
- Jos Alsters, secretary;
  - Mike Otten, treasurer;
  - Hans Onvlee, chair until November 2010;
  - Marc van Driel, chair starting from November 2010.
- These positions are non-remunerate positions in accordance with the NLnet Statutes.
- Operations** For daily operations the NLnet Operations Management was staffed with three people, totaling the staff to 2,25 FTE (Full Time

Employee), all are remunerate positions:

- Patricia Otter, administrator for both NLnet and NLnet Labs (0,45 FTE);
- Michiel Leenaars, strategy director (0,8 FTE)
- Valer Mischenko, general director (full time).

**Operations support** For external (financial and legal) advice and consultancy, Stichting NLnet is supported by:

- Van Diepen van der Kroef (legal advice),
- Koningsbos Accountants (accountancy and payroll), and
- sCore Value (investment management).

The NLnet website <http://nlnet.nl> is maintained by Mark Overmeer (MARKOV Solutions).

## 2. Overview

*NLnet financially supports open development of information society technologies. NLnet strives to facilitate shock waves of innovation.*

<b>Statutory goal</b>	The articles of association for the NLnet foundation state: "to promote the exchange of electronic information and all that is related or beneficial to that purpose".
<b>Mission</b>	NLnet actively stimulates the development of open network-related technology and makes this technology freely available to the community in its broadest sense. The technology should support and contribute to a better exchange of information.
<b>Free Software Open Source</b>	To this purpose, a wide range of Internet and technology related projects are permanently being funded for which Open Source licensing conditions (like GNU GPL, BSD license, Creative Commons and such) hold.
<b>Non-profit</b>	Stichting NLnet does not derive any financial benefits from the undertaken projects or their results.

### NLnet involvement:

**programs** NLnet has a long term commitment towards NLnet Labs - a laboratory for Internet infrastructure development. Another supported program which receives finite support from NLnet is IIDS (Interactive Intelligent Distributed Systems) currently at the Technical University of Delft. For more details see the Annex 1.

**projects** At any moment, dozens of larger and smaller projects are being financially supported by NLnet. For more details on projects sponsored in 2010 see the Annex 1.

**one-off donations** NLnet provides one-off donations to organisations and individuals whose activities are in line with the NLnet mission and philosophy. With one-off donations NLnet supports also community building in the form of workshops, hackathons, conferences, and others. More details on these and other by NLnet sponsored activities are provided in Annex 1.

**co-operation** NLnet maintains close relationships with NLUUG (the Association of

professional Open Source and Open Standards users in the Netherlands), USENIX (the Advanced Computing Systems Association) and the Freedom Software Foundation (both Europe and USA). Their regular activities, technical conferences, programs and occasional actions are being seen by NLnet as major forums to make its plans public, to encourage cooperation between information technology professionals and to obtain feedback from them.

### **Financing**

In 2010 Stichting NLnet sponsored projects, programs and other activities to the sum of € 1.335.216 (compared to € 1.573.005 in 2009). The total expenditure was € 1.662.989.

For 2011 Stichting NLnet has a budget of € 1.471.092 for financing of projects, programs and other sponsoring and donations. The total budget equals € 1.787.375.

*Next to financing of third parties activities, in line with its policy, NLnet played an advisory role 'pro bono' for projects and a select number of organisations and government agencies.*



### 3. Strategy, policy and working methods

- Goal** Stichting NLnet's primary goal is to contribute to an open information society through the development of information technology and dissemination of knowledge. This is done by stimulating new Internet and broader network technology research and development, primarily for managing and maintaining effective network operation, to improve existing technology, and to encourage new applications of existing technology. Stichting NLnet has chosen to do this by supporting Open Source (non-proprietary) oriented projects. Because we believe that open source as a development method harnesses the power of distributed peer review and transparency of the development process, and therefore promises better quality, higher security and reliability, more flexibility, lower cost, and exclusion of vendor lock-in.
- Open Source** All results of projects are made freely available to the community in the broadest sense, usually with GPL, BSD, Apache or other Open Source licenses. The results where possible shall be presented in one or more publications and/or at one or more suitable international conferences.
- Strategy** In 2008-2010 the strategy, as set up by the Board in 2006-2007, was continued. The main strategic attention was given to: effective mechanism for acquiring projects based on an open subscription, diffusion of innovation and "quality of life" of the users of the technology. Major part of the budget was spent on projects lying within strategic themes focusing on resolution of modern society problems with the help of open (network) technology. See Strategic Themes below.
- Methods** Stichting NLnet uses the following methods to reach the goals:
- subsidise software and hardware development;
  - finance applied research into network technology, often in co-operation with universities;
  - provide financial and organisational backing for dissemination and exchange of knowledge about Internet technology through conferences, workshops and contests;
  - sponsor knowledge exchange seminars and conferences in order to spur debate and stimulate dissemination and deployment of results, knowledge and experience;
  - on the occasion, pay travel costs of authoritative persons developing the relevant technology who otherwise would not be able to attend key meetings,

conferences and such.

### ***Sponsoring model***

Four level sponsoring and financing support model underpins the NLnet policy:

1. On the highest level there are two programs being sponsored by NLnet on long term commitment basis: NLnet Labs and IIDS. These two, as a rule, consume almost € 1 mln, which is around half of the total annual NLnet budget.
2. The second level is formed by projects with a life span of 2 to 3 years within selected strategic themes (see below). The budget for this depends on urgency and quality of proposals and can go as high as hundreds of thousands Euro per year.
3. The third level is for smaller project proposals requiring not more than € 30.000 per project with duration, in general, not exceeding one year.
4. Sponsoring of conferences, workshops, hackathons, seminars, contests and financial compensation of travel costs for participants of these events form the forth level of NLnet sponsoring model.

### ***Strategic Themes***

NLnet in 2007 has chosen two main themes, namely

- Identity, privacy & presence
- Open Document Format

as main areas to focus its funding upon. With these two themes NLnet tried to actively pursue the further enhancement of online privacy and standardisation in open document formats.

See for more information: <http://www.nlnet.nl/themes/>

### ***Larger projects***

These are projects with budgets going up to hundreds of thousands Euro, with average duration of 2 to 3 years.

In line with the chosen strategy, only those proposals for larger projects are being considered which fall under one of the strategic themes.

In order to acquire project proposals for larger projects NLnet applies both passive and active tactics.

The passive tactic includes open calls for proposals on the website, press releases, interviews, etc.

The active one includes approaching universities, commercial companies, communities and individuals, seminars, announcements at various events, and others.

### ***Smaller projects***

The smaller project proposals, i.e. those with requested budget not exceeding € 30.000 per project and duration not exceeding one year, are intended for new technology reconnaissance, smaller teams or individuals with not too expensive ideas, which can potentially lead to break-throughs in some fields, but are therefore riskier and less predictable than larger projects.

In contrast to larger projects, there is no strict requirement for smaller projects to fall under one of the strategic themes.

There are in total 6 calls per year for smaller project proposals

placed every two months (falling on the first day of every second month: February, April, June, August, October, December).

### **Selection policy**

In fact anybody may apply for financial support to the proposed project. However, in order to be seriously considered for financing, the proposal shall at least meet the following criteria:

- the project shall stimulate the use of network and information exchange technologies for peaceful and human purpose;
- the project results will be freely distributed based on Open Source principles, e.g. under a GPL or other open source license;
- the applicant is ready to undertake efforts to disseminate project results or will provide support in this;
- the project would last max. two to three years for larger projects, or less than 1 year for smaller projects.

These criteria are used for the first round of selection. For the second round of the selection some additional criteria are applied:

- is the target group large enough?
- what is the possible impact of the developed SW or HW?
- are there possibilities to build upon the development?
- is the solution generic enough?
- risks bound to the project / break-off risk?

Next to the open application procedure, in some cases NLnet actively approaches parties which can, due to their experience in some field, substantially contribute to the existing projects or otherwise to the goals of NLnet.

Incoming proposals go through well defined and tested assessment and selection procedure, followed by exchange of opinions with project leaders and eventually third-party experts.

### **Procedures**

The thorough and time-tabled procedure for project selection is intended to ensure objectivity and separation of selection from decision making. The work flow adjacent to this procedure can be described as follows:

After receiving (a set of) proposal(s) NLnet validates if projects meet the general criteria; in case a project is not eligible, submitters are informed within two weeks, so that they do not waste time waiting for funding that will never come.

Next step is assessment of each individual project based on the score card (criteria, rating) of the proposal.

For a smaller project proposal the NLnet management decides which projects will be financed at every round of open calls for proposals. The director obtained a power of attorney from the Governing Board to sign Memorandums of Understanding (MoU) with project teams on behalf of NLnet.

For larger projects the primary selection with a description of the project proposal and recommendations of the management

are sent to the Governing Board, which approves or disapproves the selection or sends it back to the management for further work-out. The Governing Board decides whether a project proposal is of interest to and appropriate for NLnet.

The management organises, where possible and viable, personal meetings with project teams to discuss details of the project, NLnet requirements, payment schedule and *modus operandi*. After an MoU is signed, projects may commence, therewith starts the supervision of NLnet over the projects. The supervision includes meetings and status discussion with project teams, monthly or bimonthly project reports, phone calls, mail exchange, etc.

The payments are made after reaching milestones defined in a project plan, which is always the part of an MoU.

The work flow includes evaluation after completion of the project.

## 4. Finances

Stichting NLnet finances its projects and activities from the annual revenues being received on the invested capital as well as the capital itself. NLnet also uses donations from third parties to finance project activities, and co-sponsors projects with other organisations, this under the condition that independence of NLnet in choosing and financing projects is assured.

**Fiscal Status** Stichting NLnet does not derive any financial benefits from the undertaken projects or their results. Since 1999, Stichting NLnet has had a non-profit tax status (so-called Article 24 status, “algemeen nut beogende instelling”). In accordance with ever changing legislation NLnet in 2007 obtained and in 2009 confirmed its the non-profit tax status (ANBI-regeling) with the Dutch Tax Authority.

**Administration** Salary administration was contracted to Cent Lonen in Haarlem. Koningsbos Accountants has been charged with compiling and auditing Stichting NLnet's Annual Accounts 2010 and have given an unqualified opinion. The accountancy report is a separate document. The figures are incorporated in this annual report.

**Cost of activities in 2010** The cost of Stichting NLnet's activities in 2010 is summarised below and compared to 2009 and 2008:

	2010	2009	2008
Cost of projects	744.972	868,906	626.462
Cost of programs	590.244	704,099	
Cost of staff	242.979	308.764	320.391
Depreciation of inventory & equipment	2.222	3.676	5.694
Other costs	82.572	123.406	107.799
<b>Total</b>	<b>1.662.989</b>	<b>2.008.851</b>	<b>1.835.450</b>

**Revenue of activities**

	2010	2009	2008
Donations	23.601		

**Cost and revenue of investment management**

The cost and revenue of managing the invested capital of Stichting NLnet in 2010, compared with numbers for 2009:

	2010	2009
Realised results from investment funds	271.179	-212.782
Realised results from forward exchange contracts	-375.462	-2.746.333
Realised currency differences in cash accounts	-12.584	-162.349
<b>Total realised result</b>	<b>-116.867</b>	<b>-3.121.464</b>
Transaction costs and custody charges	-7.937	-105.316
Investment management fees	-31.052	-98.392
<b>Total cost of investments</b>	<b>-38.989</b>	<b>-203.708</b>
<b>Realised revenue on investments</b>	<b>-155.856</b>	<b>-3.325.172</b>
<b>Delta in unrealised results</b>	<b>-1.215.127</b>	<b>1.512.848</b>
<b>Revenue realised and unrealised</b>	<b>-1.370.983</b>	<b>-1.812.324</b>
Interest revenue	69.831	33.115
Special revenue	23.601	58
<b>Total special revenue</b>	<b>117.036</b>	<b>33.173</b>
<b>Net capital gain / loss (-)</b>	<b>-1.277.551</b>	<b>-1.779.151</b>

The unrealised result of the investment portfolio can be summarised as follows:

	2010	2009
Unrealised result on investment funds	-1.221.841	-1.395.724
Unrealised result on forward exchange contracts	6.714	2.908.572
<b>Total revaluation reserve ultimo 2010 (2009)</b>	<b>0</b>	<b>0</b>

**Balance Sheet 2010 (2009)**

	2010		2009	
	debit	credit	debit	credit
<b>Assets</b>				
<i>Total inventory</i>	<b>3.046</b>		<b>3.767</b>	
<i>Total investment funds</i>	<b>9.096.843</b>		<b>17.121.760</b>	
Current assets	15.350		10.468	
Liquid assets	5.263.877		400.705	
<b>Total Assets</b>	<b>14.379.116</b>		<b>17.536.700</b>	
<b>Liabilities</b>				
Capital and reserves capital <i>reserves</i>		<b>16.933.201</b>		<b>20.721.203</b>
<i>Total net liabilities</i>		<b>386.453</b>		<b>603.498</b>
<b>Total Liabilities</b>		<b>17.319.654</b>		<b>21.324.701</b>
<b>Total profits and losses</b>	<b>2.940.538</b>		<b>3.788.001</b>	
<b>Total Balance</b>	<b>17.319.654</b>	<b>17.319.654</b>	<b>21.324.701</b>	<b>21.324.701</b>

**Budget for 2011**

The budget for 2011, as approved by the board, is as follows:

	2011	2010	2009
Cost of programs and projects	1.471.092	1.611.400	1.914.000
Cost of organisation including staff	313.283	312.957	320.110
Depreciation of inventory & equipment	3.000	3.000	5.000
<b>Total</b>	<b>1.787.375</b>	<b>1.927.357</b>	<b>2.239.110</b>

Marc van Driel,

Chair Governing Board Stichting NLnet



## Annex 1

### Programs, projects and activities in 2010

#### *Programs in 2010*

**NLnet Labs** Network technology development and engineering: NLnet Labs was founded by Stichting NLnet in 2000 to develop, implement, evaluate, and promote new protocols and applications for the Internet. Its activities are focused on topics directly relating to the Internet's infrastructure, such as DNS (Domain Name System), DNSSEC (DNS Security Extensions), Ipv6 (Internet Protocol version 6), and routing.

In 2009 "Unbound", a recursive nameserver that was first released in 2008, in collaboration with Nominet, Verisign, and Kirei, continued to mature in terms of robustness and was recognized by the community as a ISP-grade, stable, secure, high-performance product. One of the goals of Unbound is to provide an easy means to enable DNSSEC validation for as many users that would like to use DNSSEC.

NLnet Labs joined the OpenDNSSEC collaboration that set out to develop a turn-key solution for the deployment of DNSSEC by zone-owners. The project is a collaboration with IIS, Kirei, Sinodun, Nominet, Surfnet, and SIDN, and maintains its own website at <http://opendnssec.net/>.

NLnet Labs continued to track and participate in various initiatives with respect to Routing and Addressing by performing experiments with OpenISP while in November a proposal to ENISA for a project to perform stocktaking of current routing security deployment was successfully submitted.

With the participation of its staff in the IETF (The Internet Engineering Task Force), ICANN (Internet Corporation for Assigned Names and Numbers), IAB (Internet Architecture Board), and various ad-hoc committees NLnet Labs has continued to assume some responsibilities with respect to technical input into Internet Governance.

For more information see [www.nlnetlabs.nl](http://www.nlnetlabs.nl)

**IIDS** Design and self-management of large scale autonomous systems is (and has been for the last 10 years) the main theme of the **Intelligent Interactive Distributed Systems Research** IIDS research program. Research focuses on the (1) design of multi-level reflective architectures for systems of autonomous (human and automated) systems, and (2) distributed management of such systems.

As planned, in 2010 new distributed algorithms for self-management and distributed monitoring have been designed, implemented and evaluated. Evaluation and validation will be continued in 2011. The most important domains of application

have been: a shared dynamic data grid, SLA negotiation and monitoring, a simulation/emulation framework, self-management of tree overlay networks, self-configuration of crisis management communication structures, and self-configuration of energy resources.

Our contribution to the GRAAP workgroup (Grid Resource Allocation Agreement Protocol) on a new WS-Agreement negotiation protocol (drafted together with a number of other institutes) has been proposed at the Open Grid Forum (OGF-30) meeting in Brussels.

The AgentScape framework designed to support large-scale, heterogeneous, secure, mobile agent systems is under continuing development. Two new milestone versions have been released of AgentScape in 2010. Many new features have been identified and documented in Feature Development Plans as part of the development roadmap of AgentScape.

For more information see [www.iids.org](http://www.iids.org) and [www.agentscape.org](http://www.agentscape.org)

## Incoming project proposals in 2010

### *Received proposals*

In 2010 NLnet has received in total 177 project proposals (compared to 173 in 2009), whereof 36 requests were granted (20%), against 32 (18%) in 2009.

LARGE: there were 22 requests for larger projects financing (compared to 18 in 2009), none of them were granted (0%), against 2 (11%) in 2009.

SMALL: there were 155 requests for smaller projects financing, 36 of them were granted (23%), against 30 (19%) in 2009.

### *Projects finalized in 2010*

**3G support for FreeBSD** The project's aim was improving 3GPP support for Option GT GPRS/EDGE cards, and provide a second serial channel to retrieve signal quality and other status info from the data card while being online. The project develops FreeBSD drivers for: data cards supported by the Linux hso driver, nozomi type Option cards, the 3GPP protocol daemon.

**CPAN6** The CPAN6 network can be used for collection of any kind of data (software, publications, photos, etc.), it creates any amount of archives (collections) and helps to maintain them, adds trust in publisher and security during transport, using crypto-signatures, and keeps track on license and copyright issues. It handles bundles of archives, and has so far no equivalent. CPAN6 becomes the follow-up of CPAN, Perl5's module archive. CPAN is the only archive for Perl5 for many years to come as there are no plans for replacement.

- Creating Tracked Changes in Open Document Format** The project provided a working demonstration of the earlier proposed new track change format for ODF. This helped the ODF TC to better understand the proposed tracked-change format for ODF and to demonstrate it works in practice. The demonstration was not limited to ODF files alone but could compare any two XML files and generate a tracked-change result. This enabled evaluators to put in, for example, two versions of a table in an ODF text document file and see how the changes would be represented.
- CuteHIP** The project created a lightweight, from scratch implementation of Host Identity Protocol (HIP) on Java. Existing HIP implementations have been evolving since 2004 and became complex and hard to maintain and use. There was a need for new simple implementation of RFC5201-5202 that is cross-platform (not bound to any Operating System) and not limited to run on any vendor hardware.
- Featuring SIP Communicator** SIP Communicator is an audio/video Internet phone and Instant Messenger. It supports most of the popular instant messaging and telephony protocols simultaneously, such as SIP, XMPP/Jabber (hence GoogleTalk), AIM, ICQ, MSN, Yahoo! Messenger, IRC and Bonjour. This particular project concerned a number of tasks needed to be accomplished so that SIP Communicator could become a viable or even better alternative for Skype, but all in Open Source.
- FOSSology Binary Compliance Module** The project created a new module for FOSSology which detects if object code resulted from the compilation of specified source code. Or, in other words, the tool assists with discovering license violations and avoiding copyright infringement issues. The success of the project attracted lots of attention of, among others, hardware manufacturers. CISCO decided to co-finance the next phase of the project.
- Generic Proxy Appliance** A wireless community network can be used for various applications. It provides point-to-point communication between users of a local network: between individual users (using P2P, VoIP or VPN) or a user and a service provider which is directly connected to the network. Also, the network can be used as a Last Mile for the Internet access for both mobile and 'fixed' users. With the current broadband services, there is unused bandwidth at any given moment in time. The goal of the project was to develop an internet proxy appliance with additional features allowing to utilize unused bandwidth in (wireless) networks.
- GoogleSharing** GoogleSharing is a special kind of anonymizing proxy service, designed for a very specific threat. It ultimately aims to provide a level of anonymity that prevent Google from tracking user's searches, movements, and what websites the user visits. GoogleSharing is something designed exclusively for

communication with Google, as being the most utilized search engine and online information provider. GoogleSharing was on the radar of many journalists and the specialists within the security community, since this project helps to address many of the concerns of users. GoogleSharing is available as add-on to FireFox and has since been installed on hundreds of thousands of computers.

**HTTPS observatory** This project with the Electronic Frontier Foundation (EFF) aims to verify whether we can trust Certificate Authorities (CAs) issuing digital certificates for secure internet communication. The EFF collected an Internet-wide dataset of all publicly visible TLS CA certificates in order to: 1) search for CA-certified Man-In-The-Middle (MitM) attacks against HTTPS privacy, and 2) to measure the extent to which browsers really need to trust hundreds of available CAs completely. Extended datasets measuring from multiple source networks (via Tor) and using SNI were also collected. The project convincingly proved that the existing CA model is fundamentally broken. The EFF is going to move forward with alternatives or cross-checks for the CA system, such as DNSSEC. Also there are plans for a distributed version of the SSL Observatory which will be able to detect attacks that are only visible to their victims.

**IPv4 - IPv6 Translation Gateway** IPv4 and IPv6 networks are incompatible. The IETF recommendation has usually been to rely on dual-stack deployment: have both networks coexist until IPv6 takes over IPv4. However, IPv6 growth has been much slower than anticipated. Therefore, new IPv6-only deployments face an interesting challenge communicating with the predominantly IPv4-only rest of the world. A similar problem is encountered when legacy IPv4-only devices will need to reach the IPv6 Internet. This very successful project implemented an open-source NAT64 gateway to run on open-source operating systems such as Linux and BSD. T-mobile placed an order to the developers to roll-out the system on their USA-wide network.

**JigLib** JigLib is an open source 3D rigid body physics engine. So far, most of the web browser implementations of this technology were reliant on closed source 3rd party plugins (Flash, Silverlight, Unity3D etc.). The project created an open source, community driven port of JigLib to JavaScript for use with WebGL, thus providing a portable API for linking to other WebGL JavaScript libraries. Within the project a demo application showcasing the potential of this library and of WebGL was produced in order to stimulate participation of the open source community in further developments of 3D tools for upcoming 3D Internet.

**KDEPIM Quality Sprint** In order to keep track of the quality of code, KDE has started an initiative called Krazy, to have measure of quality and to make the community aware of this measure. This project was about

getting the number of reported issues down, enhancing the tools used to measure quality and to speed up the re-licensing process of KDE.

**Ksplice** Ksplice is a new technology for protecting the security and reliability of machines and appliances on the network. Currently, all computer systems need to be rebooted regularly to apply OS updates, in order to be secure against potential attacks over the network. Ksplice for the first time made it possible for system administrators and end-users to perform OS updates effortlessly, and in many cases without a reboot. This project made an open source Linux distribution be the first operating system in the world that does not require regular reboots for security updates. This technology also has the potential to significantly hinder network attackers by reducing the window of vulnerability during which computer systems are running software with known problems. As Ksplice makes almost instant security updates possible without the cost of bringing down a system for patching, it solves an underlying weakness in the system. Random malicious activity, no matter how it has been disguised, is therefore far more unlikely to achieve its objective of compromising the system.

**LTSP-Cluster** Thin clients (PCs where all data is kept on a remote server and only the desktop is kept locally), are already in use for a long time. These days, increased bandwidth and Cloud Computing allow us to go further, even to stream the complete desktop from the Internet. The possibility to start a desktop "on demand" from the cloud offers interesting new collaboration possibilities: any application can instantly become remote accessible. For instance, having a graphic design reviewed by a design interface specialist. Or program together/review code within a single IDE instance. The goal of this project was to completely integrate remote access to a cluster of LTSP servers that can be directly accessible or streamed from any private or public cloud (like Amazon EC2).

**Mailman Secure List Server** Mailman is the most popular Open Source mailing list manager. But there was no re-encrypting mailing list manager with support for both PGP and S/MIME protocols. The Secure List Server project "mailman-pgp-smime" included OpenPGP and S/MIME support in Mailman, the GNU Mailing List Manager. Adding re-encryption enables groups of people to cooperate and communicate securely via email: mail can get distributed encrypted to a group of people, while the burden of managing individual keys is dealt with by the list software, not the sender. Furthermore, authentication is possible: the list server software takes care of checking this. This way, strong security for groups of people gets available for a wide audience.

**MU-Jingle** When a meeting between a scattered group of people needs to take place, a phone conference is a popular solution. These

calls can become costly especially when participants have to make long distance or international calls to participate. Multi-User Jingle has improved over three longer existing solutions:

- over Jingle: by supporting more than two participants.
- over Skype: by being an open standard with a free software implementation.
- over SIP: by supporting reliable peer-to-peer connectivity, as opposed to requiring dedicated media relay infrastructure, thereby allowing a video stream from each participant without the need for multiplexing.

**MSRP chat server** This project's goal was to develop a Message Session Relay Protocol (MSRP, RFC 4975) with support for the MSRP relay extensions (RFC 4976) open source peer library for the Java developers community intended to be flexible enough so that it can be used by any application to transmit any kind of message content. This library is now also being used by SIP-Communicator to provide SIP file transfer.

**MSRP client Java library** This project's goal was to develop a Message Session Relay Protocol (MSRP, RFC 4975) with support for the MSRP relay extensions (RFC 4976) open source peer library for the Java developers community intended to be flexible enough so that it can be used by any application to transmit any kind of message content. This library is now also being used by SIP-Communicator to provide SIP file transfer.

**Next Phase Graphical User Interface for the SIP SIMPLE** The combination of multiple media streams in SIP sessions is a future-proof design that shall eventually take over other commercially closed real time communication solutions available on the market today. The Graphical User Interface for the SIP SIMPLE client project is a project that have produced the source code and binary installation packages for Linux, Microsoft Windows and MacOSX operating systems. The packages provide a fully featured graphical client for Voice, IM, file Transfer and Desktop Sharing based on SIP and MSRP protocols.

**ODF metadata in Koffice** Metadata is an exiting new feature of OpenDocument Format. The open source cross-platform KOffice suite is an exemplary ODF implementer, and is a strong implementation outside the famous OpenOffice.org. The goal of this project was to add full ODF metadata support to KOffice.

**ODF revision in Koffice** KOffice has a strong OpenDocument implementation, but was lacking some features. In KOffice 2.1 there is only basic support for track changes as per the OASIS ODF specification. The project added full support to the relevant KOffice products, to create another strong independent implementation of this part of the specification.

**OfficeShots** This project created a service called “Officeshots” which lets document authors and designers upload (ODF) documents to a web service and see how different office suites render their documents. This allows authors of complex documents and designers of ODF templates to ensure that their documents work under many different office suites. The service works in a manner similar to Browsershots where HTML authors can ensure that their designs work under various browser versions.

**Online Self-defence in 10 minutes** The guide “Online Self-defence in 1 minutes” (in Dutch “Online Zelfverdediging in 10 minuten”) of the organisation Bits of Freedom is intended for a wide audience and provides an opportunity to improve your your online self-defence in ten minutes with easy to follow steps. One may quickly start efficient protection against things like spam, viruses and identity fraud. In addition, the guide helps to protect the major user online activities like surfing, email, social networking and file sharing.

**Open Design and Implementation of Privacy-Friendly Public Transport Card** This project is about the OV-chipkaart (OV, Openbare Vervoer in Dutch stands for Public Transportation), a single national chipcard for all public transport in the Netherlands, which is similar to London's Oyster card or Hong Kong's Octopus card. It is now a proprietary solution being introduced by Trans Link Systems (TLS), a consortium of public transport companies. From early 2008 up to now the OV-chipkaart has come under heavy attack because of both security and privacy concerns and even became a subject of heavy political discussions. The aims for this project were twofold:

- 1) On the one hand, to concentrate documenting of the current OV-chipkaart system, make a public repository of knowledge. Factual information about the design, strengths and weaknesses of the current system; an explanation of all the things that were in the news since roughly January 2008.
- 2) On the other hand, experiment with the card in order to transparently develop a new system from scratch in which RFID technology is used for ticketing in public transport. Using an open design process and design criteria, the quality of the solutions can be evaluated by a broad audience, including scientists, hackers, and of course stakeholders such as transport companies. This process must eventually result in an open standard.

**Plug in Your Desktop** Make UPnP devices integrate seamlessly with a Free Software desktop, including discovery, management, popup in file browser, etc. Explicit focus was laid on desktop-wide (as opposed to application-specific) integration and medium-term goal of desktop-independence in order to share the technology with other Free Software desktops.

**Proxima 2.0** Proxima 2.0 has built a server-based generic web editor which can be used to create powerful editors with little effort. It

allows easy creation of WYSIWYG editors on web-pages, without requiring the user to install any software. Instead, a browser runs a simple script that draws a rendering of the edited content and sends edit events back to the server. The Proxima generic editor system has a layered architecture that can be modified in a straightforward way to support a client-server model.

**Pulse Audio** The project aimed to extend the PulseAudio sound server to support echo cancellation technologies needed to be able to do high quality VoIP conferencing. With the growing popularity of VoIP and videoconferencing, the issue of echo cancellation on the Linux desktop is growing in importance. The Linux audio layer has long been a struggling beast with a lot of competing solutions, all of them with their own set of flaws. Thanks to the increased resources put into the media layers by Linux distribution vendors last time, a combination of ALSA and PulseAudio is emerging as a de-facto standard sound system layer, with GStreamer being the application writers interface. The natural place to put a system wide echo cancellation was in the Pulse Audio sound server.

**realXtend communications component** Developing the communications component for realXtend, an open source project creating a platform for interconnected virtual worlds. Virtual worlds excel at interpersonal communication, the component that enables textual and voice communications is a vital part of the system. Work was to port the Telepathy framework to the realXtend platform. This project provided the open source virtual worlds community with a communications system that allows anyone who wants to host a world to also have high quality communications available from the shelf.

**RFID Guardian Development** All people getting in touch with the RFID technology, i.e. buyers and users of virtually any goods sold, shall have means to manage the information which is sampled and uncontrollably transmitted by the RFID chips. For this purpose the RFID Guardian was developed. The RFID Guardian is a battery-powered device that represents the first-ever unified platform for RFID security and privacy administration. The RFID Guardian acts as an "RFID Firewall", enabling individuals to monitor and control access to their RFID tags by combining a standard-issue RFID reader with unique RFID tag emulation capabilities. Additionally, the RFID Guardian is useful as an RFID security diagnostic and auditing tool.

**Representing Changes in Open Document Format** This project addressed deficiencies in the ability of the Open Document format to record changes. This was deemed to be a critical area for the wider acceptance of this format. The current capability in this area had limited scope and a number of known problems. The technology proposed as a result of the project establishes a superior solution which puts Open



Document format at the absolute front for revision management.

**Security of UPnP protocols** One of the new trends in home entertainment is the use of networked media players and media servers. Many of these players make use of the UPnP A/V protocol for distribution of content. Earlier research has exposed many vulnerabilities of the UPnP protocols which implies numerous threats. There are already many apparatuses in the market but there was no serious and independent research done on the implied risks of these products. Like possibility to steal content or push content to media players (audio/video spamming). The aim of the project was to explore these vulnerabilities and let the manufacturer bring in necessary improvements to their apparatuses.

**Small Sister** This is a privacy project that aimed to fight the dangers of data retention. A simple architecture based on existing technologies (PGP, TOR, Freenet) should take a chat-message or e-mail to another user and then place it online waiting for the recipient. By doing so it is obscure who communicated, but it is not obscure to the recipient (if the sender wants so). Unfortunately the project did not completely work out as was planned, the application was not complimented with a number of features intended to make this a user friendly system.

**Virtual Distro Dispatcher** Virtual Distro Dispatcher is a distributed system which aims to project virtual, fully operational operating system instances on arbitrary terminals. Client terminals can be obsolete PCs or energy saving thin clients (such as mini-ITX) managed by a powerful, multiprocessor (and possibly clustered) central system. The VDD gives users a possibility to enjoy their own favorite operating systems, including those that are not Open Source, possibly at the same time, simply by switching from one to another, on each single thin client, on demand, across a network.

**XSSer** Currently, XSS attack is one of the most widespread vulnerabilities in Web applications. Incorrect filtering and the appearance of new increasingly sophisticated techniques make protection a complex and time-consuming task. Cross Site "Scripter" aka XSSer, is an open source penetration testing tool that automates the process of detecting and exploiting XSS injections in different applications. It contains several options to bypass certain filters, and various special techniques of code injection. It makes it possible to test an application on vulnerabilities to Cross Site Scripting (XSS) attacks by fully automating these complex application security testing tasks.

### **Projects started in and running through 2010**

**Ocpm** The potential of SIP telephony as an open standard to free users from the legacy of POTS (Plain Old Telephony Service) is not yet being fulfilled. There are more and more lock-in arrangements of vendors instead. This project intends to overcome these barriers and to design and build open source firmware for digital phones. The project makes use of DNSSEC, ZRTP and IPv6:

- DNSSEC secures the information looked up on remote parties;
- ZRTP secures conversations and if it is missing, this will be explicitly communicated to end users.
- Direct media streams between IPv4 endpoints can only be built up using sophisticated handling, while IPv6 simplifies and improves SIP technology immensely.

**ActiveSync your Kolab** Kolab is a modular groupware solution being used in a wide variety of settings, including heterogeneous environments with KDE Kontact and Microsoft Outlook clients. Differentiating features for Kolab include a security centric design and support for end-to-end encryption on GNU/Linux and Windows. Kolab is also unique in that it has no proprietary components and offers a strong migration path on the desktop from Windows to GNU/Linux and has been designed with strong privacy in mind. The next generation of Kolab clients brings secure semantic search in encrypted email for Kontact, the primary Kolab client, on GNU/Linux, Windows, Mac OS X, Maemo and Windows Mobile.

**Anomos** Anomos is a pseudonymous, encrypted multi-peer-to-peer file distribution protocol. It is based on the peer/tracker concept of BitTorrent in combination with the onion routing anonymization layer of Tor, with the added benefit of end-to-end encryption. By combining these technologies, a platform is being created where by no party outside of the trusted tracker will have any information about who a peer is or what they are downloading.

**A better Linux SCTP** The Internet transport layer has been extremely rigid since its inception. The very diverse requirements of today's applications are mapped to only two services, provided by the two protocols that are broadly available, TCP and UDP. The Stream Control Transmission Protocol (SCTP) offers promising benefits to applications, but faces significant deployment problems. One of these problems is related to shortcomings of its Linux implementation ("LKSTCP"), which causes it to perform much worse than TCP under most circumstances. The goal of the project is to make the SCTP an attractive option for application designers, thus making it perform at least as good as TCP.

**Blender2realxtend** realXtend is an extension to Opensim, an open source implementation of a virtual environment platform like Second

Life. It provides some additional features Second Life didn't plan. One of the key feature of realXtend is support for arbitrary mesh information, not just simple primitives like spheres and cubes. This feature allows to create much richer 3D worlds, experiences and 3D-content. However, there was no good support for realXtend in Blender, the best open source mesh editor. This project aims at implementing a GPL plugin for Blender, capable of connecting and managing a realXtend world. It would allow to create shared worlds directly from Blender, including editing of simple logic to populate a virtual world. It will also allow direct back-and-forth exchange of 3D-content between virtual worlds and Blender.

**Creating Tracked Changes in Open Document Format** The ODF file format is an open format for storing computing documents. The format is gaining support for tracking changes made in revisions of documents. In order to advance the cause of including feature complete change tracking in the ODF file format specification, and to validate the elegant and innovative technical new designs before they are added to the standard, this project aims to adds initial support for this change tracking mechanism to the ODF code in the Abiword word processor. This will allow AbiWOrd to save and load the change tracking information in the new syntax.

**CUGAR** This project aims to develop and implement a (Wireless) Access Point and a back-end for it using only open source software components. The Access Point (AP) together with the back-end makes secure environment for Closed User Group Services. This allows a secure connection between AP and the back-end when using a non-secure transport medium (like the Internet). The whole system is being developed as an "appliance" and a back-end software package. AP itself is implemented on small embedded systems, while the back-end (authentication, management, routing) can run on a generic UNIX system.

**Design and empirical evaluation of secure and efficient multipath communication** The goal of the project is to implement open source extension of TCP/IP stack to support multipath communication in the Internet. With this approach, users will be able to improve their connection speed and reliably by utilizing several network interfaces simultaneously and receiving aggregate bandwidth. This project designs an efficient and secure multipath solution on a wedge-layer. Based on Host Identity Protocol (HIP) the design supports multihoming, mobility, NAT traversal, advanced security features, network coding for efficiency in lossy networks and will match the requirements of the most modern applications.

**Desktop Streaming and Sharing with SIP Communicator** The possibility to allow remote access to one's ongoing desktop session has been appealing to users ever since the early days of Internet communication. This project is about Desktop Sharing and Streaming, being stressed on certain characteristics, like ease of session establishment, interactivity, and privacy

protection. SIP Communicator users get the possibility to stream their desktop to any SIP or XMPP/Jingle user agent. It also allows for seamless integration in more advanced use cases such as video conference calls, slide presentations, and remote learning.

**Extending AbiWord and Improving AbiWord OpenDocument** Compliance with open standards and more specifically OASIS OpenDocument Format (also standardised in ISO/IEC as IS26300) is essential for interoperability in a heterogeneous document environment. The goal of this project is to resolve some issues with the implementation of ODF in the lean and innovative AbiWord word processor and make it more compliant with the OpenDocument specification.

**GSM Security Project** The popular GSM cell phone standard uses outdated security and provides much less protection than its increasing use in security applications suggests. This project aims to correct the disconnection between technical facts and security perception by creating a GSM tool that allows users to record and analyze GSM data. This project complements several other current open research projects into GSM technology. These projects, including OpenBTS, OpenBSC, and OsmoconBB, create open re-implementations of network equipment and hand sets to make the technology more accessible and open. It builds on these insights and shows the security limits of the technology.

**HWIOS** The HWIOS project (Hybrid Web In OpenSim) is meant to create an accessible interface to the popular and most developed virtual world platform called OpenSimulator, as one of the main problems of OpenSimulator is that it's too technical for people who want to perform basic operations within this virtual world platform. The hybrid web interface communicates directly with OpenSimulator server, and is thus able to hide the most of the complexity of admin tasks, and therefore, makes most admin tasks easier for less technically oriented user. Besides administrative tasks like user-, service- and land-management, HWIOS is meant to become a general-use next-gen webportal. The whole web application is strongly focussed on supporting html5 features, like collaborative text editing through web sockets.  
This project is being co-financed by SURFnet.

**Improving AbiWord OpenDocument** The goal of this project is to make the AbiWord word processor more compliant with the OpenDocument specification. Scope: resolving all current software bugs related to AbiWord's OpenDocument compatibility.

**Jingle Relay Nodes** One of the main goals of the first version of the Jingle Protocol was to create a P2P enabled protocol, depending on XMPP for routing but at the same time able to negotiate sessions and exchange content without main proxy servers. After 5 years we still didn't have implementations which supported the current

specifications in full. SIP on the other hand, is not very efficient and simple to use for P2P connections, but is widely deployed. It is much simpler to install and, although with higher costs, does provide media connectivity. "Jingle Nodes" simplifies the erection of (public) relays, It also makes every buddy in your contact list a potential Node. An additional positive aspect is that a client does not need to run its own Relay Node, but only configure its "usage specification" (no more than two or three pages), as the application runs on the server side.

**Jitsi - next level of SIP Communicator** Jitsi (formerly known as SIP Communicator) is a realtime communication solution in open source, and a s offers a compelling and secure alternative for solutions like Skype. Jitsi supports Audio/Video calls with SIP (and very soon XMPP), and Instant messaging for almost all popular protocols such as XMPP/Jabber/GoogleTalk, MSN, AIM, ICQ, IRC, Yahoo! Messenger and Bonjour. Jingle conference calls and Jingle encrypted calls features are also implemented. This project is about adding new features to Jitsi that would take it beyond what's currently possible with Skype, as well as other closed platforms, which would address an even wider span of communications use-cases. The list of tasks in this project is: Video conference calls, audio/video calls support with MSN, Cross-protocol conference calls, Using Outlook, Address Book, and Thunderbird as sources of contact information, and many others.

**Ksplice for Fedora** With previous support from NLnet, Ksplice has made the free software Linux distribution Ubuntu be the first operating system in the world that does not require regular reboots for security updates. Ksplice Ltd has started providing rebootless OS updates to more than 10,000 users of Ubuntu, but larger-scale deployment was needed in order for the technology to become truly mainstream. The goals of this project are: 1) to provide rebootless OS updates to 100,000+ users running the major community Linux distributions (namely Fedora), and 2) to get the Ksplice kernel software merged into the mainstream Linux kernel.

**ODF generic track changes in KOffice and Calligra** This project is about writing and testing the code to produce valid ODF track changes according to both the ODF 1.2 specification and the newly proposed ODF track changes format. Another NLnet project proposed for a new and vastly improved change tracking format, that is able to capture an unprecedented nuance in change tracking. By creating a full blown implementation of the proposed specification in these two ODF compliant suites, including the most difficult use cases, the technical proposal is validated in a real world environment. The project will also implement basic Change Tracking migration to the new proposed format.

**ODF Global Recipes** The ODF recipes project is about demonstrating what ODF libraries can do (and how) and attract users to them. Advancing

the cause of ODF by showing its effectiveness and simplicity compared to legacy formats. The main idea is to develop a platform where any ODF library developer can upload its own library and benefit from this suite of recipes. Practically, such a project entails the opening of a wiki grouping cookbooks and recipes to perform defined tasks in those libraries. But instead of separating each library with its own pages, it compares them to perform the same task.

**Scanning tool for external connections** Large networks are often connected to the internet. In most cases the main internet gateway is secured using specialized products and personnel. Laptops, printers, mobile devices and desktops nowadays often have more than one network interface and it's likely that on some systems within an organization these additional interfaces are (accidentally) used to create unauthorized or unknown internet connections. Due to this an organization's system might have several backdoors which might be abused to bypass organization's system access policies. Scanning tool for unknown and unauthorized external connections is intended to uncover such connections.

**SPEAR** Secure Peer-to-peer Services Overlay Architecture of the Helsinki Institute for Information Technologies (HIIT) is a pilot experiment with the community, studying privacy and mobility aspects of P2PSIP. The project develops a generic mechanism to support such distributed services as P2P Session Initiation Protocol (P2PSIP). In contrast to other approaches, security is taken as the corner stone of design, integrating support for Host Identity Protocol (HIP) Based Overlay Networking Environment (HIP-BONE) into the architecture. The architecture can support various P2P services, not limited to P2PSIP, such as P2P HTTP. P2P HTTP can also be used to create a community version of many useful scenarios as plenty of current applications are based on HTTP.

**Supporting Telepathy and SIP in AbiCollab** This project is centered around AbiWord, a Free and Open Source word processor, which supports most of the features people have come to expect from a modern word processor. It also comes with features that are not present in competing products, most notably support for real time document collaboration through the AbiCollab plugin. The AbiCollab plugin allows multiple people to work on-line on the same document at the same time. This eliminates the costly (timewise) and error prone practice of sending document updates over email to co-authors to keep everyone in sync. AbiCollab is designed to be transport protocol independent. It currently supports collaborating over plain TCP, XMPP/Jabber, the OLPC mesh network and over the AbiCollab.net service. This project aims creation of two additional AbiCollab transport backends. The first would use the Telepathy framework. The second AbiCollab backend would be based on the SIP SIMPLE client SDK.

**WebODF** Aim of the project: make an ODF editor that runs in the browser. WebODF is an innovative initiative because it is the first attempt at FOSS implementation of an office suite based on HTML5. Using HTML5 means that the code will run on nearly all modern computing systems. On top of that the ODF XML will be used nearly unaltered in the program. This project will help WebODF to grow: to have architectural documentation, save support, simple editing support and better rendering. Also a plugin for another NLnet initiated platform OfficeShots is planned to be produced that writes PNG and PDF format files.

## Initiatives and activities

**Durability of information through metadata** Thanks to various open source minded initiatives and organisations, including NLnet, all recently valid Dutch legislation became available in Open Document Format (ODF/ISO 26300:2006). The government with the action plan has at the same time used the Netherlands open in connection a movement. At the same time the Dutch government, with her action plan The Netherlands Open in Connection (Nederland Open in Verbinding) initiated the full transition of all editable documents to this unified open standard instead of several application dependent or obsolete formats like .doc, .wpd en .xls. This combination offers evident real added value. An important component here is the opportunity being provided by the new version of ODF (1.2) to use metadata (RDF), which in turn offers numerous previously unknown possibilities to improve document processing.

**Government and public sector** NLnet remained being actively participating in various fora regarding implementation of open standards and open source in the public sector. Most notable participations are:

- Hearings in Danish Parliament on open standards applicability, Copenhagen, 22 January 2010;
- Consultation round “Forum Standaardisatie” w.r.t. placing ODF 1.2 on the List of Standards of the Dutch Government;
- Pre-ICANN consultations;
- Workshop ODF Adoption at “Forum Standaardisatie”;
- Consultations with Agentschap NL;
- Open Government 2010, 15-16 December 2010.

**Talks and booths**

- Keynote at Open Source symposium, 11 november 2010;
- ODF Plugfest, Brussel, 14-15 oktober 2010;
- Two extended sessions on NLnet project during the research event ICT Delta, Rotterdam, 18 March 2010;
- Interview Reuters about WikiLeaks.

## Event sponsoring

**Received requests** In 2010 NLnet has received in total 26 (compare 14 in 2009) requests for events sponsoring and donations, 8 of them (compare 3 in 2009) were granted.

**Granted requests** Below is an overview of all donations made by Stichting NLnet in 2010 (some requests were granted in 2009 but paid in 2010):

- Big Brother Awards 2010 of Bits of Freedom , The Netherlands,
- Raumzeitlabor sponsoring, Hackerspace in the Rhein-Neckar area, Mannheim, Germany,
- ElectroSmog, networked anti-mobility festival of De Balie, Amsterdam, The Netherlands,
- Staat van de privacy, the countries public management congress with Privacy as theme, Tilburg, The Netherlands,
- Stichting Randomdata, hackerspace sponsoring, Utrecht, The Netherlands,
- GUADEC 2010, Gnome users conference in The Hague, The Netherlands,
- TERENA Networking Conference, June 2010, Vilnius, Lithuania,
- IETF 78 Meeting in Maastricht, The Netherlands, financial guarantee,
- IPv6 Awards 2010, November 2010, The Hague, The Netherlands.