Stichting NLnet Annual Report 2009

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Content

Introduction by Chair Governing Board

Developing and maturing network technology may be seen as boring or trivial by many, if noticed at all. The internet and the avalanche of technologies that ride on the back of it are just supposed to work. We at NLnet foundation fully agree, but work isn't done yet. If you visualize the grants that NLnet provides to projects as little red flags on a map, that map would span many countries on the planet looking even if you just look at where the developers come from - from Canada to Hungary, from India to Finland, from the Netherlands to the United States. In 2009 over 170 new projects were submitted to us, of which 32 were rewarded.

That is impressive by itself, especially given the high quality of the submissions. But if you mark the places where those projects had a noticeable impact with green flags, with a size depending on their importance for society or technology, then suddenly there would be a lot more (and a lot bigger) flags. When students in Iran told the world what was happening during the election protests, they were circumventing censorship through the Tor anonymity system - courtesy of a grant by NLnet to work on providing access for internet users without high-bandwidth connections some months before. When KSplice Upstart was launched in 2009, it made an open source Linux distribution the first operating system in the world that did not require regular reboots for security updates. When the domain name system was successfully hacked and it became clear that finally the root of the internet would be signed with DNSSEC, the long standing contributions of the NLnet Labs staff in that area were virtually present in the form of a whole battery of sizable green flags.

There are many more important projects and activities that NLnet has been able to fund over the last dozen of years. Exiting things happen all the time, because of our funding - and we are proud of that. Some projects brazenly move into new ground. Others concentrate on seemingly more modest goals such as achieving better interoperability. When the first international ODF plugfest was launched in the Hague by the Netherlands minister of Foreign Trade Frank Heemskerk, a combined grant from NLnet together with the Dutch government provided important tooling for interoperability testing. That might sound boring as well, but we are not in it for the glamour. A lot of hard work goes into making things reliable, secure and trustworthy.
NLnet foundation has a simple mission: an inclusive open information society that offers choice, privacy, security and technical robustness in every aspect - whether this involves remote collaboration, semantic technology or services delivered over the network. In 2009 we have seen good progress towards those moving goal posts. I hope that after reading this annual report you will agree, and that we can again count on your inspiration, collaboration, expertise and donations in 2010 and beyond.

on behalf of the board,

Hans Onvlee

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. It was the Netherlands Local Unix User Group (NLUUG), which played a major role in raising the so-called pan-European "UNIX" Network. To support this 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

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 WorldCom/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.

Domicile

Since 2007 NLnet is located in Amsterdam. It is registered at the Chamber of Commerce, Amsterdam under number 41208365.

NLnet foundations

To be able to maintain a clear separation between Stichting NLnet's funding operations and the project technology related operations, Stichting NLnet has created separate legal entities for some of its more specialized projects, such as 2000's Stichting NLnet Labs and Stichting LogReport (closed in 2005) and 2001's Stichting SchoolLan (closed in 2006). These foundations, directed in full or in part by Stichting NLnet, have obtained a full non-profit tax status.

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;
- Hans Onvlee, chair;
- Mike Otten;
- Marc van Driel (joined the Board mid 2009).

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:

- Valer Mischenko, general director (full time);
- Michiel Leenaars, strategy director (0,8 FTE);
- Patricia Otter, administrator (0,45 FTE; whereof 0,15 FTE is dedicated to administrative tasks of NLnet Labs).

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 Attica Vermogensbeheer (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 wants to facilitate shock waves of innovation.

Network research 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.

Open Source 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.

Non-profit Stichting NLnet does not derive any financial benefits from the undertaken projects or their results.

NLnet involvement:

programs NLnet has a long term commitment towardsNLnet 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 2009 see the Annex 1.
In 2007 NLnet has chosen two themes which continued to define the selection of larger thematics project proposals in 2008-2009. These themes are:

- Identity, privacy & presence.
- Open Document Format.

See Strategic Themes on page 9 for more info.

donations NLnet provides donations on a regular basis to a number of non-profit organisations whose activities are in line with the NLnet mission and philosophy.
With 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.

memberships

- NLnet is a Patron of the Free Software Foundation Europe;
- NLnet is a Corporate Member of USENIX (The Advanced Computing Systems Association);
- NLnet is an Executive Organization Member of ISOC (the Internet Society);
- NLnet is a Sponsor Member of ISOC.nl (the Dutch chapter of the Internet Society);
- NLnet is a Sponsor Member of the NLUUG (the Dutch Unix Users Society);
- NLnet is a founding member of OpenDoc Society.

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 2009 Stichting NLnet sponsored projects, programs and other activities to the sum of € 1.573.005 (compared to € 1.401.566 in 2008). The total expenditure was € 2.008.851.
The cost of staff was kept under 16%.

For 2010 Stichting NLnet has a budget of € 1.611.400 for financing of projects, programs and other sponsoring and donations. The total budget equals € 1.927.357 .
The cost of staff shall again be kept at around 16%.

Next to financing of third parties activities, 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 2008-2009 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 (about 2/3) 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.
NLnet intends to define new or redefine existing themes in 2010, wherein again the substantial part of the available yearly budget will be spent upon in coming years.

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 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 projects falling within Strategic Themes) or less than 1 year (for smaller project up to € 30.000).

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 procedures, followed by exchange of opinions with project leaders.

Procedures

The thorough and time-tabled procedure for project selection are 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 smaller project 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 (contracts) 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 Governing Board signs Memorandums of Understanding with project teams.
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 a 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. Interim project status reports are sent to the Governing Board.
The payments are made after reaching milestones defined in a project plan, which is the part of the Memorandums of Understanding.
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. When an opportunity arises NLnet will use donations from organisations and individuals and governmental subsidies to finance project activities, 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 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 2009. The accountancy report is a separate document. The figures are incorporated in this annual report.

Cost of activities in 2009

The cost of Stichting NLnet's activities in 2009 is summarised below and compared to 2008 and 2007:

	2009	2008	2007
Cost of projects	868,906	626.462	881.493
Cost of programs	704,099	775.104	
Cost of staff	308.764	320.391	425.620
Depreciation of inventory & equipment	3.676	5.694	3.522
Other costs	123.406	107.799	402.794
Total	2.008.851	1.835.450	1.713.429

Cost and revenue of investment management

The cost and revenue of managing the invested capital of Stichting NLnet in 2009, compared with numbers for 2008:

	2009	2008
Realised results from investment funds	-212.782	1.541.027
Realised results from forward exchange contracts	-2.746.333	1.617.488
Realised currency differences in cash accounts	-162.349	179.902
Total realised result	***-3.121.464***	*3.338.417*
Transaction costs and custody charges	-105.316	-84.093
Investment management fees	-98.392	-199.013
Total cost of investments	***-203.708***	*-283.106*
Realised revenue on investments	***-3.325.172***	*3.055.311*
Delta in unrealised results	***1.512.848***	*-10.870.671*
Revenue realised and unrealised	***-1.812.324***	*-7.815.360*
Interest revenue	33.115	35.833
Special revenue	58	1.619
Total special revenue	***33.173***	*37.452*
Net capital gain / loss (-)	***-1.779.151***	*-7.777.907*

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

	2009	2008
Unrealised result on investment funds	-1.395.724	-7.455.203
Unrealised result on forward exchange contracts	2.908.572	-3.415.468
Total revaluation reserve ultimo 2009 *(2008)*	***0***	*0*

Balance Sheet 2009 (2008)

	2009		2008	
	debit	credit	debit	credit
Assets				
Total inventory	***3.767***		***4.467***	
Investment funds	18.689.588		20.996.615	
Revaluation reserve		1.567.828		
Total investment funds	***17.121.760***			
Current assets	10.468		48.303	
Liquid assets	400.705		119.675	
Total Assets	**17.536.700**		**21.169.060**	
Liabilities				
Capital and reserves				
capital reserves		***20.721.203***		***30.334.560***
Total net liabilities		***603.498***		***447.857***
Total Liabilities		**21.324.701**		**30.782.417**
Total profits and losses	3.788.001		9.613.357	
Total Balance	**21.324.701**	**21.324.701**	**30.782.417**	**30.782.417**

Budget for 2010 The budget for 2010, as approved by the board, is as follows:

	2010	2009	2008
Cost of programs and projects	1.611.400	1.914.000	1.895.177
Cost of organisation including staff	312.957	320.110	332.110
Depreciation of inventory & equipment	3.000	5.000	8.000
Total	1.927.357	2.239.110	2.235.287

Hans Onvlee,

Chair Governing Board Stichting NLnet

Annex 1

NLnet programs, projects and activities in 2009

Programs in 2009

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

IIDS Intelligent Interactive Distributed Systems Research Design and self-management of large scale autonomous systems is (and has been for the last 10 years) the main theme of 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. In 2009 different architectures and algorithms have been studied. The most important domains of application have been: self-reconfiguration of complex web-services, self-diagnosis of financial transactions, self-management of distributed electronic files, self-configuration of crisis

management communication structures, and self-configuration of energy resources. The role and importance of service level agreements, terms and conditions, and logs as evidence, are topics that have been studied in these contexts in interaction with the Computer and Law Institute. The AgentScape framework designed to support large-scale, heterogeneous, secure, mobile agent systems including identity management, and pseudo-anonymity of mobile agents, bilateral web service access, service reconfiguration, distributed directory services, is currently capable of hosting up to 20.000 agents in simulations/emulations (e.g. auctions). Extended tutorials and developer support (including a forum) have been developed in 2009. Two AgentScape developer meetings were organised. A new version of the AgentScape Roadmap for AgentScape development has been devised.
For more information see www.iids.org

Projects in 2009

Received proposals

In 2009 NLnet has received in total 173 project proposals (compared to 127 in 2008), whereof 32 requests were granted (18%).
LARGE: there were 18 requests for larger projects financing (compared to 11 in 2008), 2 of them were granted (11%).
SMALL: there were 155 requests for smaller projects financing, 30 of them were granted (19%).

Relatedness to themes

The table below provides some indication of distribution of projects (being run and/or granted in 2009) from the point of view of relatedness to the two strategic themes:

Theme:	Identity, privacy & presence	ODF	Not related
Small project	33	13	21
Large project	4	0	0
Total:	37	13	21

Note that some projects counted were granted already in 2007-2008, and the other way around some granted at the end of 2009 were not yet running in 2009.

Projects finalized in 2009

The following projects were finalized and closed in 2009:

Bricophone

The Bricophone is a community-oriented mobile phone infrastructure in Open Source (both for hardware and software). It is a low cost, low energy, open hardware project built for communities up to ten thousand people within regional distances. The characteristic of the Bricophone infrastructure is that it does not require any static infrastructure like relays,

antennas, or digital data centers. Bricophone is based on mesh-networking principle.
The project was ran by CRASlab (LE CENTRE DE RESSOURCES ART SENSITIF à Mains d'Œuvres).
Unfortunately, the project stopped due to the lack of progress on some critical technical issues.

CAcert CAcert is a community initiative to provide free X.509 security certificate service. X.509 is used in network protocols like SSL, HTTPS etc., e-mail readers and browsers and security devices. CAcert is a non-profit association based in Sydney, Australia.
NLnet sponsored the reorganisation of CAcert in 2007 and continues sponsoring the Mozilla root certification process being implemented by an external auditor.

Converter OpenDoc to Gettext and XLIFF Thus the objective of this project is to allow documents in the XML based OpenDocument format to be extracted for easier translation in translation tools. Unique of this project is that in order to reach the objectives, a collaborative arrangement between two organisations, namely Translate.org.za and Itaapy, was forged with the objective to build a solid platform by using the expertise from each organisation and software project.

FSF High Priority Projects The Freedom Software Foundation high-priority projects list serves to foster the development of projects that are important for increasing the adoption and use of free software and free software operating systems. he priority projects list shows areas where free software development needs to accelerate in order to stop users from being drawn to proprietary software and operating systems. It lists holes that aren't fully covered by existing projects.
This involvement with FSF also resulted in two projects being financed by NLnet.

Freedom Task Force The FTF (Freedom Task Force) created an independent and sustainable Free Software legal infrastructure across Europe - the European Legal Network. In order to support activities of this Legal Network, an online and offline ournal called International Free and Open Source Software Law Review was established. NLnet helped with domain registration and paid the subscription fee.

Global Independent Streaming Support Global Independent Streaming Support (G.I.S.S.) is an international network of free media activists, working in building an infrastructure for free media experiences, radios and televisions. In essence this is the only open system with different components and tools for setting up an independent radio or TV channel. Herewith one can easily create a channel and start transmitting just within 1 hour time using a live CD. Next to this G.I.S.S. is a real network supporting video transmission and archiving, offering a full solution for alternative media.

GNUnet Goal of the project is to come up with adaptive protocols which adjust resource allocation based on automatically obtained network performance metrics that characterize the behavior of faulty or malicious nodes. The proposed new protocol shall be

able to prevent peers from launching asymmetric attacks, which leverage weaknesses in the system and magnify the damage caused.

Lokalize Lokalize is a cross-platform computer-aided translation system that focuses on productivity and performance. It is fine-tuned for open source software translation and is used in production by contributors of KDE, openSUSE, and several other projects.

Morphle Morphle is a project to stitch and glue together a large number of web 2.0 and 3.0 technologies. What is to be achieved is, among other things, providing the end-user with the ability to combine very easily web page parts such as snippets, widgets or components to create sophisticated web-sites. The second component of the Morphle project is to offer all of these tools through the Internet and accessed directly through the browser. Eventually, Morphle's hosting system will served-up from next-generation large scalable web-server (called Morphel) at very low costs.

Network Event Kit The Network Event Kit (NEK) is a kit allowing to quickly and cheaply build a network for various types of events. This kit will offer both cabled and over-the-air infrastructure. Next to building an Open Source Network Event Kit, the purpose is to gain knowledge and experience in practical setup that has value for Open communities.

NoScript - ABE component NoScript increases web client security by applying a Default Deny policy to JavaScript, Java, Flash, and other active content. It provides users with an one-click interface to easily whitelist sites they trust for active content execution. This project is specifically focused on developing a new web browser component called ABE (Application Boundaries Enforcer), aimed to mitigate or defeat Cross Site Request Forgery attacks against sensitive web applications.

NUMBERTEXT-MONEYTEXT This project represents well-defined spreadsheet functions and a language-neutral algorithm for the number to text (number name) conversion for the ODF OpenFormula standard, also an OpenOffice.org Calc extension as a working implementation. It is a generalization of the BAHTTEXT function and a huge number language-dependent third-party extensions of Microsoft Office Excel 2003 and OpenOffice.org.

OpenStreetMap Netherlands OpenStreetMap is a unique project with a unique purpose: to make a complete and free world map. However the map itself is not the only important part of the project. The underlying data allows many sophisticated applications to be built upon these data. Route planners, special maps, various analysis tools, etc. This project will help to set up a new OpenStreetMap API server with live rendering.
The project was stopped due to the lack of any progress and interest of the requesting team, all money are returned to NLnet.

Parrot Parrot is a virtual machine (VM) designed to execute byte code for interpreted languages efficiently. Many modern programming languages do not translate programs into machine native

instructions, but produce some intermediate byte code which needs be interpreted by a virtual machine when the program is run. Parrot will run the byte code for the Perl 6 programming language, which is being developed.
Other famous virtual machines are JVM and .NET. These environments are not Open Source and not free of restrictions. They also both target only statically typed programming languages. As a result, they are not ideal environments for many popular (scripting) languages like Python, Ruby, and Perl. Parrot fills that gap.
Because of its importance this project was recently split by The Perl Foundation into a separate Parrot Foundation.

Sabayon Linux management framework Sabayon Linux is a free, open source, Gentoo based, GNU/Linux distribution aimed to compete against Ubuntu in terms of hardware support, features and packages availability. This includes a management framework called Entropy, a RedHat Anaconda based installer, 3D/Hardware support.

Tor for low-bandwith users One of the major goals of the Tor project is to provide secure anonymous Internet access to users in repressive states. These location often have very slow Internet connections to the outside world. By enabling these users to use the Tor network, significant progress can be made towards free communication and free information in these countries. The Tor anonymity system was previously only usable by Internet users with high-bandwidth connections - upon start of a Tor client, a large file with all Tor server descriptions is being downloaded. This project will remove this restriction by optimizing the size of necessary downloads.

Tor Hidden Services The Tor Anonymity System's key functionality called Hidden Services allows users to set up anonymous information services (like websites) that can only be accessed through the Tor network and therefore are protected against identification of the host that runs the services. An evolution of the Tor protocol is proposed to speed up the Tor Hidden Services, where the improved protocol will primarily change the way circuits are set up.

Projects started in and running through 2009

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.

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 should also allow for seamless integration in more advanced use cases such as video conference calls, slide presentations, and remote learning.

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.
The design and the implementation is conducted by MARKOV Solutions in The Netherlands.

CuteHIP The project will create 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 is 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.

Desktop streaming and sharing for SIP Communicator Desktop Sharing and Streaming features are of interest to virtually all internet users. This is why all commercial instant messengers ship with some form of implementation for this feature. However, the feature is generally unavailable with free/open source communicators. This project is all about running Desktop Sharing and Streaming on the SIP-Communicator, stressing on certain characteristics, like ease of session establishment, interactivity, and privacy protection.

Extending AbiWord and Improving AbiWord OpenDocument The goal of this project is to make the AbiWord word processor more compliant with the OpenDocument specification. On its way to full acceptation in the real world, AbiWord needs to meet open standards (ISO/IEC 26300:2006).

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 such as SIP, XMPP/Jabber (hence GoogleTalk), AIM, ICQ, MSN, Yahoo! Messenger, IRC, Bonjour and new ones will be coming soon. This particular project concerns 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.

Generic Proxy Appliance A wireless community network can be used for various applications. It provides point-to-point communication between the users of the local the network: between individual users (using P2P, VoIP or VPN) or the user and some 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. This project's goal is to develop an internet proxy appliance with additional features allowing to utilize unused bandwidth in (wireless) networks.

GUI for SIP SIMPLE Client This project implements the Graphical User Internet for the open source SIP SIMPLE client. It provides the source code and binary installation packages for fully featured graphical client for Voice, IM and Presence based on SIP protocol for Linux, Microsoft Windows and MacOSX operating systems.

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 project is about implementing an open-source NAT64 gateway to run on open-source operating systems such as Linux and BSD.

Jingle Relay Nodes Jabber's extension for audio/video conferencing is limited to communications between two users. Extending Jabber further to support multi-party audio/video conferences will allow it to match the functionality of proprietary offerings, whilst still providing all the benefits of XMPP. It is intended that Multi-User Jingle improves over three existing solutions:
* Jingle: by supporting more than two participants.
* Skype: by being an open standard with a free software implementation.
* SIP: by supporting reliable peer-to-peer connectivity.

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 is 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 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 makes it possible for system administrators and end-users to perform OS updates effortlessly, without a reboot. This project will make 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. Thus, Ksplice solves the underlying weakness in the system so that no malicious activity, no matter how it has been disguised, will be able 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 is 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 Currently, there is no re-encrypting mailing list manager with support for both PGP and S/MIME protocols. Mailman is the most popular Open Source mailing list manager. The Secure List Server project "mailman-pgp-smime" aims to include OpenPGP and S/MIME support in Mailman, the GNU Mailing List Manager. Adding re-encryption will enable 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.

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 will be used with the SIP-Communicator to provide SIP file transfer.

MSRP chat server This project aims to implement an open source MSRP multi-party IM (Instant Messaging) chat server that works seamless with the MSRP relay implementation. MSRP protocol (draft-ietf-simple-message-sessions) is a work item of the SIP SIMPLE (approved standard). At the moment, SIP SIMPLE lacks Open Source implementations, which hinders its wider adoption.

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. It is intended that Multi-User Jingle improves over three existing solutions:

- Jingle: by supporting more than two participants.
- Skype: by being an open standard with a free software implementation.
- 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.

OfficeShots This project created a service called “ODF-Shots" which lets ODF authors and designers upload documents to a webservice 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 Browser-shots where HTML authors can ensure that their designs work under various browser versions.

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 propriatory solution being introduced by Trans Link Systems (TLS), a consortium of public transport companies. Early 2008 the OV-chipkaart has come under heavy attack because of both security and privacy concerns. The aims for this project are twofold:
- 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.
- 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, the design criteria and the quality of the solutions can be evaluated by a broad audience, including scientists, hackers, but of course also stakeholders such as transport companies. This process may 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 on desktop-wide (as opposed to application-specific) integration and medium-term goal of desktop-independence in order to share technology with other Free Software desktops. The donation covers costs of developer sprints.

Proxima 2.0 Proxima 2.0 builds a server-based generic editor which can be used to create powerful editors with little effort. It will allow an easy creation of WYSIWYG editors on web-pages, without requiring editing 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.

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 is to port the Telepathy framework to the realXtend platform. This project

will provide 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.

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 is being 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.

RFID Guardian Quickstart This Project intends to accelerate hardware prototyping of the RFID Guardian Project. This "RFID Guardian Quick Start Action" project was intended to bootstrap the large RFID Guardian Development project. It is also intended to place the Quick Start Action in a larger context, and in this helping to transform the concept of the RFID Guardian into a commercial open-source hardware product.

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.

Small Sister This is a privacy project that aims to fight the dangers of data retention. A simple architecture based on existing technologies (PGP, TOR, Freenet) will 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).
The application will be complimented with many user friendly features to make this an easy to use system.

SPEAR 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. We envision that P2P HTTP can be

used to create a community version of many useful scenarios as plenty of current applications are based on HTTP.

Virtual Distro Dispatcher Virtual Distro Dispatcher is a distributed system which aim is 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 favourite 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.

3G support for FreeBSD The project aims 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.

Initiatives and activities

Dutch government innovation vouchers Open source and open standards are important for incremental innovation, which makes it especially relevant for small and medium enterprises. SenterNovem, an agency of the Ministry of Economic Affairs of The Netherlands, has a subsidy scheme for SME's to make knowledge transfer possible between knowledge institutions like universities and research institutes and small enterprises. NLnet successfully started a campaign for Dutch SME's to apply for and subsequently donate these so called innovation vouchers at SenterNovem to NLnet projects that have knowledge transfer questions, and was subsequently donated dozens of vouchers to each worth 2.500 or 5.000 euro.

Open Table NLnet was one of the ten invited parties to participate in the 'Open Table' briefings with Dutch minister of Foreign Trade Frank Heemskerk. The Netherlands cabinet has an ambitious agenda to make a more robust and secure IT infrastructure; NLnet's expertise in both standards and open source is shown to be appreciated.

Public innovations One of NLnet's employees was asked as a technical advisor to the Ministry of the Interior and Kingdom relations to assist with finding the ten most innovative public projects; the winning projects received funding for upscaling.

OpenDoc Society NLnet employee Michiel Leenaars was vice-president of OpenDoc Society during 2009; among the activities of the society in this year were the first two ODF plugfests, organised together with NoiV and the Ministry of Economic Affairs and launched personally by Netherlands minister of Foreign Trade Heemkerk. Other activities include participation in SC34 meetings, setting up the Officeshots.org service, publishing a brochure together with NoiV and Adobe on document formats,

providing input to Commissioner Kroes concerning treatment of ODF in Microsoft products and talks during various events.

Internship A student System and Network Engineering from the University of Amsterdam had a one month internship at NLnet, during which he completed a report and an implementation of desktop sharing over SIP using the NLnet sponsored SIPSIMPLE client library.

Talks A number of talks were given by NLnet staff in 2009 during the following events: Lightning talks about NLnet at 26C3 Conference of Chaos Computer Club, Berlin; Presentation Open Tafel, The Hague, December 2009; Plugfest and OOoCon Orvieto, Italy, November 2009; ODF Plugfest, The Hague; eLiberatica Conference, Bucharest, May 2009.

Donations and events

Received requests In 2009 NLnet has received in total 14 requests for events sponsoring and donations, 3 of them were granted.

Granted requests Below is an overview of all donations made by Stichting NLnet in 2009 (some requests were granted in 2008 but paid in 2009):

- eLiberatica, a conference dedicated to the promotion of open source in Romania, May 2009,
- Sponsoring of presence of Blender at the annual Siggraph convention, 3-7 august, in New Orleans USA,
- Grant for Trip to ODF Plugfest in The Hague for Conrado Viña of Feng Office,
- Hacking at Random, July 2009, hackers summer festival, The Netherlands,
- KOffice@plugfest, Orvieto, Italy, October 2009,
- IPv6 Awards 2009 – Corporate Life, November 2009, The Netherlands,
- TERENA Networking Conference, June 2010, Vilnius, Lithuania.