

Stichting NLnet Annual Report 2013

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Introduction

L.S.,

The year 2013 in many ways was a challenging year for our foundation, but the decisions made that year, and the actions taken, have provided us with a solid base for 2014 and further.

First of all, we thoroughly reviewed our focus themes for the coming years. Within the wide scope of our mission "to promote the exchange of electronic information and all that is related or beneficial to that purpose", we clearly identified that specific issues in this electronic information exchange need special attention and support from institutes like NLnet.

The rapid expansion of cybercrime activities, and the increasing breach on the privacy of Internet users are becoming such a prime threat of the Internet that NLnet decided to focus its support in 2014 on 'a safer open Internet'.

Secondly, we faced an increasing challenge to support the Internet and Open Source community while our funds are seriously decreasing. This forces NLnet to adapt its support programs using less financial cash-out while still achieving a maximum support to the society.

In 2014 NLnet therefore will start to award project-loans instead of project-donations, and will expand on the subgranting of projects from other available funds.

Moreover, NLnet will investigate the possibility of partnering with or (co-)investing in early-seed technology-firms that clearly work on 'a safer open Internet' to both support the right developments as well as to possibly collect returns to support other projects.

Lastly, we changed the organisation of our foundation by bringing in wider Internet, security and financial experience by assigning a new director, who also already joined the Board for maximum shortcutting of the decisions needed.

Irrespective these turns and changes, NLnet again substantially supported the Internet community in 2013. In this annual report you will read about the extent of our funding, how the foundation is organised, and which internet technologies and R&D efforts were seeded through NLnet.

Once more I want to thank the individuals, organisations and public institutions that made donations directly to NLnet, or made contributions or follow up donations or investments directly to any of our projects.

We have joint challenges with you to keep the Internet in good shape, and to maintain the open and federated internet as we all originally envisioned. Safety and privacy of users turn out to be protected far less well than often assumed. At the NLnet Foundation we will focus to support initiatives on this, for which we look forward to work together with you.

On behalf of the board,

Marc van Driel,
Chair Governing Board Stichting NLnet

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 by the NLUUG 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. Stichting NLnet is a recognized charity (Algemeen Nut Beogende Instelling) according to Netherlands legislation¹.

Domicile NLnet Foundation, together with NLnet Labs, holds 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:

- Maarten Botterman, chair (since 01-01-2013);
- Frank van Rijn (since 01-01-2013)
- Hanneke Slager

These positions are non-remunerated positions in accordance with the NLnet Statutes, except for a financial compensation for time spent ('vacatiegeld'). In 2013 the Supervisory Board in its entirety has received a total compensation of Euro 7650,-

Governing Board The Governing Board of Stichting NLnet in 2013 consists of:

- Marc van Driel, chair.
- Harm Rietmeijer, treasurer (start May 1, 2013)
- Bert Wijnen (start May 1, 2013)

¹ More information at <http://www.anbi.nl>

- Monic Schijvenaars, secretary (resided in September 2013);
- Mike Otten, treasurer (resided in September 2013);

- New in 2014: Marc Gauw, secretary (start February 1, 2014)

These positions are non-remunerated positions in accordance with the NLnet Statutes, except for financial compensation for time spent ('vacatiegeld'). In 2013, the Governing Board in its entirety received a total compensation of Euro 18334,-

Operations

For daily operations the NLnet Operations Management was staffed in 2013 with the following people (remunerated positions), totaling the staff to 1,25 FTE (Full Time Employee), all are remunerated positions:

- Patricia Otter, administrator for both NLnet and NLnet Labs (0,45 FTE);
- Michiel Leenaars, strategy director (0,8 FTE);

Total actual fte-costs in 2013 for 1,25 fte: Euro 152.088,-

- New in 2014: Marc Gauw, general director (start February 1, 2014)

Total budgetted fte-costs in 2014 for 2,6 fte: Euro 275.730,-

In 2013 the bureau was further supported by the following externals:

- Valer Mischenko (NL Netto)
- Jos Alsters (ITsall)
- Bram Boswerger (intern)
- Bert Bruns (Bridges to Beyond)

Operations support

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

- Co-Advocaten (legal advice),
- Koningsbos Accountants (accountancy).

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.

Statutory goal 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".

This is done through stimulating new internet and broader network technology research and development, improving existing technology, encourage new applications of existing technology and dissemination of the relevant knowledge.

Mission 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.

**Free Software
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 NLnet does not derive any financial benefits from the undertaken projects or their results.
Any future possible benefits will be used to reach statutory goals of NLnet.

Co-operation NLnet maintains close relationships with the Internet Society (ISOC) at both the international and national level, NLUUG (the Association of professional Open Source and Open Standards users in the Netherlands), the Free Software Foundation (USA) and the Free Software Foundation Europe and other organisations in the field. 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.

Finance In 2013 NLnet sponsored projects, programs and other activities to the sum of € 617.551 (compared to € 472.516 in 2012). The total expenditure was € 1.126.031.

For 2014 NLnet has allocated € 1.052.074 for financing of projects, programs and other sponsoring. The total budget equals €1.479.474

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 and working methods

Strategic Themes NLnet maintained focus in 2013 on the following main areas of funding:

- Standards in real-time communication;
- Open Document Format;
- DNS Security.

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

Third parties willing to donate to NLnet may choose to dedicate their donations to one of these themes or to NLnet in general.

Sponsoring model Three level sponsoring and financing support model underpins the NLnet policy:

1. On the highest level there is one program being sponsored by NLnet on long term commitment basis: NLnet Labs – a laboratory for Internet infrastructure development.
2. The next level is formed by projects requiring not more than € 30.000 per project with duration, in general, not exceeding one year. If successful, and require more funding, NLnet may consider consequent finding(s), thus making it NLnet's focus project.
3. One-off donations - sponsoring of conferences, workshops, hackathons, seminars, contests and financial compensation of travel costs for participants of these events.

Projects The smaller project proposals, i.e. those with requested budget not exceeding € 30.000 per project and duration not exceeding one year, seemed to be a very powerful instrument intended for new technology reconnaissance, which can potentially lead to break-throughs in some fields.

For more details on projects sponsored in 2013 see Annex 1.

Standalone donations NLnet may choose to provide standalone donations to organisations and individuals in order to stimulate their activities which are in line with the NLnet mission and philosophy.

These include but are not limited to sponsoring of conferences, workshops, hackathons, seminars, contests etc.

With standalone donations NLnet also supports community building in the form of workshops, hackathons, conferences, and others.

More details on these and other activities sponsored by NLnet are provided in Annex 1.

Distinctive NLnet derives its yearly budgets from the available capital and the interest gained from investment of (a part of) this capital. The

investment practice has shown, however, that such policy in the long run does not guarantee stable income or the amounts of money needed to keep spendings at the level necessary for any significant impact.

Therefore NLnet decided to experiment with investing of a part of the asset in technologies we understand, in people we trust and in concepts we believe will change the world to the better. And to earn money which can be used to accomplish the mission of NLnet.

To this purpose a number of potential investment projects were assessed in 2012 and the first choice fell on Appcache Ltd ('5apps').

By the end of 2013, Appcache has reached a mature stage, on which NLnet will apply an exit strategy on the medium/long term.

For 2014 more investment opportunities will be assessed., preferably in the scope of 'a safer Internet'.

4. Finances

Stichting NLnet finances its projects and activities from the annual revenues received on its invested capital as well as from the capital itself. NLnet also solicits 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 supported projects or their results.

Since 1999, Stichting NLnet has had a non-profit tax status (so-called Article 24 status, "Algemeen Nut Beogende Instelling")².

In accordance with ever changing legislation NLnet in 2007 obtained and in 2009 confirmed its non-profit tax status (ANBI-regeling) with the Dutch Tax Authority.

Administration Salary administration was contracted to Cent Lonen in Haarlem.

Koningsbos Accountants in Amsterdam has been charged with compiling and auditing Stichting NLnet's Annual Accounts 2013 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 2013 The costs and revenues of Stichting NLnet's activities in 2013 is summarized below, and compared with the actual costs and revenues in 2012 and the budget for 2014:

	Budget 2014	Actual 2013	Actual 2012
Cost of programs and projects	1.052.074	617.551	472.516
Cost of staff	275.730	295.984	255.805
Cost Rental Office	12.000	11.830	11.611
Office costs	3.500	2.630	2.414
Advisory costs	28.000	97.928	32.781
Remuneration Board	22.650	25.984	29.316
Miscellaneous costs	85.370	74.104	28.442
Depreciation of inventory, equipment	150	20	930
Total	1.479.474	1.126.031	833.815

Revenue of activities

	Budget 2014	Actual 2013	Actual 2012
Income and returns	337.991	38.462	27.659

Note that the increased budget in Cost of programs and projects in 2014 is budgetted to be compensated by extra income out of returning/revolving loans, and by incoming third-party budgets from subgrants.

² More information on <http://www.anbi.nl/>

Balance Sheet 2013 (2012)

	2013		2012	
	debit	credit	debit	credit
Assets				
Total inventory	583			
Participations	123.310		65.905	
Investment funds	325.257		864.539	
<i>Total Investments</i>	449.150		930.444	
Current assets	43.963		164.061	
Liquid assets	4.940.297		5.846.294	
Total Assets	5.433.410		6.940.799	
Liabilities				
Capital and Reserves		6.835.321		7.580.170
Result bookyear		-1.493.371		-630.754
Delta participation		20.405		-114.095
<i>Total Reserves</i>		5.362.355		6.835.321
Current liabilities		71.055		105.478
Total Liabilities		5.433.410		6.940.799
Total Balance	5.433.410	5.433.410	6.940.799	6.940.799

**Spread of
liquidity**

	2013	2012
Bank 1	2.130.118	2.623.281
Bank 2	2.694.399	2.642.713
Bank 3	82.907	180.157
Bank 4	32853	399.252
Bank 5	20	891
Total	4.940.297	5.846.294

Budget for 2014 The budget for 2014, as approved by the board, is as follows:

	Budget
	2.014
Cost of programs and projects	1.052.074
Cost of organisation including staff	427.250
Depreciation of inventory & equipment	150
<hr/>	
<i>Total</i>	1.479.474

Marc van Driel,

Chair Governing Board Stichting NLnet

Annex 1: Programs, projects and activities in 2013

Programs in 2013

NLnet Labs NLnet Labs is the Research, Development, and Expertise center for those technologies that turn a network of networks into one Internet. Founded by the NLnet Foundation in 2000, NLnet Labs contributes innovative ideas to open source software and open standards.

NLnet Labs' activities can best be described as contributions that bridge the gap between theoretical insights and practical deployments, that bridge between technology and policy, that are rooted in engineering and standardization, and for which public interest is often more pressing than commercial interest.

NLnet Labs activities have led to these accomplishments: it is recognized for the seminal role in the deployment of DNSSEC through creation of high-quality DNS software and tools, training, 'engineering'. In 2011, NLnet Labs continued to develop and support their various DNS software products: Unbound, NSD, Idns, and Net::DNS. They also made a start with the development of NSD4. Besides, Labs added new gems to the DNSSEC toolbox: they released 'dnssec-trigger', and started to develop 'dnssexy', a DNSSEC consistency checker.

NLnet Labs keeps heavily participating in the OpenDNSSEC collaboration that was 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/>.

Routing is another field where NLnet Labs makes a difference; we have mentored talented students through their graduation and have been providing a neutral, expert view in the various debates on routing security and its stability. More generally, we have brought and shared our insights and expertise in many discussions about Internet Governance and technical management of the Internet, thereby contributing to a better understanding of the Internet Model.

For more information see www.nlnetlabs.nl

Incoming project proposals in 2013

Received proposals In 2013 NLnet has received in total 105 project proposals (compared to 94 in 2012), whereof 15 requests were (partially) granted (14%), against 12 (13%) in 2012

Projects supported in 2013

0cpm: SIPproxy64, 6bed4, applet, freeswitch RTT This project enables secure communication over the future proof IPv6. It builds upon SIPproxy64 which should make it possible (for e.g. router or other hardware manufacturers) to translate SIP and RTP protocols in IPv4 to IPv6 and the other way around. This will allow outdated but broadly used IPv4-only SIP telephones to work and PBX-boxes to work over IPv6 network.

"If IPv4 and IPv6 are different universes, then by that metaphor SIPproxy64 is a wormhole between them".

Bringing Calligra Suite to Windows

The project will produce a standalone Windows installer that users can download and execute. The result will be that all Calligra Suite applications (formerly known as Koffice) will be available from the Windows start menu.

The Windows Calligra applications will check on startup whether a new version is available and warn the user. The applications will be built using Microsoft Visual C++ to conform best to platform standards.

FTEproxy

Network communications are increasingly becoming the target of surveillance and censorship. One natural defense is to use traditional cryptographic protocols – traditional encryption incurs low-overhead and does a good job of providing privacy. However, because encryption is so effective, many governments (e.g., Iran, Pakistan, and China) are willing to block state-of-the-art cryptographic protocols such as TLS and SSH. **FTEproxy** provides transport-layer protection to resist keyword filtering, censorship and discriminatory routing policies. Its job is to relay datastreams, such as web browsing traffic, by encoding streams as messages that match a user-specified regular expression.

Hoodie

Hoodie is – like the Unhosted project that has also received funding by NLnet – part of the **noBackend** movement. noBackend is about building data-driven apps without a smart backend. It enables frontend developers to do common backend tasks by themselves, like user authentication, sending emails, or payments.

Hoodie is one of the major open source contenders in this area - an extensible web application development framework written in Javascript with the distinct goal of making full-stack application accessible and easy to front-end developers and designers. Like Ruby on Rails did for backend development, Hoodie tries to solve many if not all of the mundane things every application needs, so developers can focus on what's unique to their apps. Hoodie is a front-end, in-browser JavaScript API that is designed from application backwards to the backend that powers it. The funding from NLnet is used amongst other to make Hoodie fully modular, and then make it extensible with plugins.

Global Directories

A global directory is a way of retrieving contact information from others, using standard technology rather than a monolithic content owner. That means you can employ automatic tools that download and update contact information without manual intervention - and without any third parties snooping into your private or business social environment. Moreover, you can use the same technology to share any relevant information (such as keys for protection of your email) to anyone yourself. The project is part of the **ARPA2.net** initiative set up by internetwide.org.

Jitsi: Replacing JMF with FMJ

Jitsi offers a free, open and secure alternative for Skype and similar communication tools. Today it offers chat, Audio/Video calls with SIP and XMPP, and Jitsi is the only tool which does it in a secure way (using ZRTP), on all major operating systems. At the heart of Jitsi's media service lies the Java Media Framework (JMF) of SUN, which was not released under a FLOSS license. The goal is to take FMJ to a stage where it can be used within Jitsi as a viable alternative of JMF. This provides Java developers with an active, free media library, and is an essential step toward porting Jitsi to other environments such as Android or porting it as a web application.

KORUZA

KORUZA is an innovative open-source open-hardware wireless communication system, employing a new low-cost approach to designing free-space optical network systems, enabling building-to-building connectivity with a highly collimated light beam at a capacity of 1 Gbps (1000 Mbps) at distances up to 100 m. It is designed to be suitable for home as well as professional users, enabling organic bottom-up growth of networks by eliminating the need for wired fiber connections and associated high installation costs. The simplicity of use, low-cost and compact size allow the system to be deployed in any network.

nftables

The Netfilter project's **nftables** is the intended successor of the popular iptables, providing a new modular packet filtering framework e.g. for operating systems based on the popular Linux kernel. Besides a modular code base that is better suited for modern multiprotocol networking environments, the nftables project aims to introduce powerful new userspace tools which will allow users to dynamically perform packet filtering on custom protocols (including but not limited to new proposed internet standards as defined by the Internet Engineering Task Force). Existing packet filtering solutions would require a recompiled kernel module in the same situation. The end result is that users will have more autonomy on what gets filtered and how, which make them less dependent on the technical choices of vendors and communities. The nftables project has been accepted in Linux mainstream kernel.

OpenDKIM + OpenDMARC

Until recent developments of domain name authentication, Internet mail has not had access to scalable mechanisms for validating an identity associated with a message. Any identifier could be used fraudulently. The Sender Policy Framework (SPF) and DomainKeys Identified Mail (DKIM) are relatively new technologies that create a foundational change by validating domain identifiers. DMARC takes steps in allowing domain owners to publish statements about their email use of their identifiers and DMARC facilitates much easier operational reporting from mail recipients to domain owners.

OpenDKIM includes DNSSEC support via libunbound of NLnet Labs. Thus this project will improve use of DNSSEC in the email security space.

PPSPP/Swirl The explosion in peer-to-peer traffic today (in many areas in the world a majority of traffic) without a backing standard has led to multiple incompatible designs, with varying quality and features. Content creators, distributors, consumers and ISPs are equally disadvantaged with the status quo, including disparate and incompatible implementations. **Swirl** has the ambitious goal to enable everyone to create, distribute, and consume static and streaming secure content from anywhere, of any size, via browser, smartphone/tablet, via home networks or commercial CDNs and routers, using open protocols, software, and an open development approach. SWIRL's Project lead Dave Cottlehuber (Austria) is an active member of the Peer-to-Peer Streaming Protocol (PPSP) working group and aims at a fully compliant implementation of the upcoming **PPSPP** standard.

More about **Swirl Project** ([source code](#))

PSYC2 Protocol for SYNchronous Conferencing is an efficient text-based protocol for delivery of data to a flexible amount of recipients or people, by unicast or multicast. PSYC2 represents a next iteration of the PSYC framework in conjunction with **SecureShare**, another NLnet supported project that aims to build a novel social messaging system as part of the **GNUnet** peer-to-peer system.

More about **PSYC2**

SecureShare The **SecureShare** project implements a social messaging service based on the GNUnet peer-to-peer framework offering scalability, extensibility, and end-to-end encrypted communication. The scalability property is achieved through multicast message delivery, while extensibility is made possible by using PSYC (Protocol for SYNchronous Communication), which provides an extensible RPC (Remote Procedure Call) syntax that can evolve over time without having to upgrade the software on all nodes in the network. Another key feature provided by the PSYC layer are stateful multicast channels, which are used to store e.g. user profiles. End-to-end encrypted communication is provided by the mesh service of GNUnet, upon which the multicast channels are built. Pseudonymous users and social places in the system have cryptographical identities — identified by their public key — these are mapped to human memorable names using GNS (GNU Name System), where each pseudonym has a zone pointing to its places.

SERVAL Long Range Add-on

Serval Project's goal is making mobile phones useful, even when there is no cellular network or internet available. This particular project prototypes a "helper device" for long-range WiFi. Serval has developed various technologies that allow voice calls, SMS, file sharing and other services in a completely distributed manner. Robust security is being progressively introduced into these technologies, with voice calls already having end to end encryption, and the UDP-like Mesh Datagram Protocol (MDP) also enjoying automatic encryption.

The Serval Project is intended to be useful in disaster and emergency situations anywhere in the world, as well as for people in rural, remote and developing world settings where traditional cellular service may not be available or may be too expensive. The Serval Project's technologies also have obvious application to enabling freedom of speech and communications for people under oppressive regimes.

Serval used to use ad-hoc WiFi on mobile phones to form the mesh network. This requires root access on Android, and is unlikely to ever be possible on iPhone. Also, ad-hoc WiFi, while useful, has many limitations, including limited range and relatively high power consumption. This particular project aims to prototype a "helper device", that would consist of a WiFi-enabled Arduino-compatible device attached to a low-cost radio module, and then to integrate that hardware with the Serval platform.

The result will be a box that allows any WiFi enabled phone (Android, iPhone, Blackberry, Nokia S60 etc) to connect to the mesh. Some platforms will have a first-class native client, e.g., Android, while others will be able to use an HTML client to access mesh functions.

Moreover, the box will be capable of long-range communications to other such boxes. Current estimates suggest that ranges of 6x-18x WiFi range are possible, allowing line-of-sight range of perhaps 1km or more. Finally, the box will be able to be integrated with satellite data terminals and short-burst data modules (basically satellite SMS) to allow the connection of mesh networks to the outside world.

SocketHub

SocketHub is a polyglot (speaking many different protocols and APIs) messaging service for social and other interactive messaging applications. It assists web app developers by providing server-independent, server-side functionality - which gives the application greater autonomy. It can be used as a tool for many different types of applications, large and small. Its lead developer is Nick Jennings (CZ).

ODF Track Changes

OpenDocument already supports a track changes mechanism, but although on par with other document formats its functionality is limited in scope. This project led by DeltaXML is aimed at assist the ODF TC Track Changes Subcommittee in establishing a powerful next generation of futureproof track changes syntax, capable of provide the next generation of reliable change tracking across applications.

Startup Europe Partnership

An effort to help the European Commission to build bridges between Europe's startup, corporate, education institutions and investment communities to help startups raise funds and beat language barriers to reach maturity.

Swartzshield SW4RTZSH13LD is not a pure technology project but is aimed to create an interactive experience to help scale awareness about the issue of information freedom and the importance of the open internet. It combines fiction, non-fiction and user participation in a transmedia adventure for Internet freedom. It tells the stories of hactivists like Aaron Swartz and Edward Snowden through the eyes of a fictional character called Roan Warsatz; better known as SW4RTZSH13LD on the web. Triggered by the self chosen death of Aaron Swartz and inspired by his ideology, Roan Warsatz not only sets out to discover what happened to Swartz but also digs deeper into the importance of copyright reform, information access, and Internet freedom. SW4RTZSH14LD will become a personalized interactive storytelling experience that is unique for each user. NLnet will contribute funding to one or more hackathons for the project.

TimeSheets This project created a platform to develop Adaptive Time-based web applications. This is applied to developing Single-Page Interfaces (SPIs). A SPI can reduce network bandwidth needs, specially important in the fast-growing use of mobile networks. Despite its importance, use of SPIs has not proliferated because it is highly complicated to develop and maintain.

A novel approach based on a W3C specification is proposed: SMIL Timesheets (project earlier supported by NLnet). This approach simplifies the design of time-based web applications and web sites. These interactive applications use time as a major structuring paradigm, i.e. time and events dictate which parts of the application are presented.

Because wasting network bandwidth is common in multi-device applications, TimeSheets also allow to dynamically adapt to the capabilities of devices, to save bandwidth and processing power.

Twisted Names EDNS(0) and DNSSEC Client Support Domain names are vital to the way we use the internet, as businesses, public institutions and private individuals. While the original system of resolving domain names was very robust and has made tremendous innovation possible, it was also found to be open to serious abuse. DNSSEC provides a cryptographic seal of authenticity that gives real proof of the validity of the domain name you use when you visit a website, chat or send an email. Through its dedicated DNSSEC fund NLnet aims to enable regular end users to profit from end-to-end DNSSEC verification and important security measures such as **DANE**.

Twisted is an event-driven networking engine written in Python and licensed under the open source MIT license. The **Twisted Names EDNS(0) and DNSSEC Client Support** project led by Twisted core committer Richard Wall (UK) will enable hardening of security in all of the core Twisted networking components, including full DNSSEC verification and DANE. These will also become easily available to hundreds of other projects that are built on top of Twisted.

Unhosted **Unhosted** is an ambitious project led by researcher Michiel B. de Jong that aims to allow a separation of data storage and services within the cloud. The project works on both working tools, libraries and on standardisation of the remoteStorage protocol. Unhosted has received prior funding from NLnet. In this project they will add extensible support for "legacy" and hosted accounts to remotestorage.js, improve documentation, rewrite some core modules, work on portable apps, and design and implement a shared notification mechanism in remoteStorage.js.

UmTRX Mission of the **UmTRX** project is to radically drop price of mobile communications in developing, rural and remote areas. UmTRX aims at providing an open-source, inexpensive yet carrier grade transceiver for GSM Base Station. This project is a part of a bigger effort to create a completely open GSM network, from a low level hardware to high level software. UmTRX will be the first open hardware to work within the core telecom networks. This open hardware is being designed specifically to work with OpenBTS and OsmoBTS/OpenBSC open-source projects. While those software projects enjoy quick growth, the hardware side is remaining proprietary. The main reason for this is that such hardware is extremely hard to develop, it requires specific skills and specialists like high-profile RF designers and lots of effort to be put in it. The intention is to utilize the results of this project for provision of affordable mobile service to people at Mayotte island.

Viewer.js In all likelihood **Viewer.JS** is the easiest way to use presentations, spreadsheets, PDF's and other documents on a website or blog without any external dependencies. No tricks, no conversions, no unexpected downtime from external services, and no plugins required – it happens to work just fine in all major browsers today from the comfort of your own webserver. Free of cost, free as in open source (so you can tweak it yourself) and very easy to use. Download and unpack on your webserver and add one small text snippet to your webpages. That is it: **Viewer.JS** does the rest.

WHATWG support HTML5 The Web Hypertext Application Technology Working Group (WHATWG) is a working group which creates high quality web standards. This project aimed to standardizing web infrastructure at the WHATWG, to set forth the standardization process of HTML(5) as "Living Standard", as purported by WHATWG. Primary focus is on getting the URL Standard ready with the end result being to keep the web free from lock-in by making sure everyone can implement its functionality.

Wormhole / Sylkserver There are two leading internet technologies emerging as the future of real-time communication: SIP and XMPP. This project and its outcome will provide the possibility for users of both universes to use either protocol to seamlessly interoperate with each other for audio, instant messaging and presence.

If the software is installed on the desktop next to an existing application it can encapsulate or tunnel conversations from one protocol to the other - serving as a wormhole between the two universes. It should work transparently with little or no configuration. It will allow users to share contacts and establish chat and audio sessions without having to bother of the protocol used to address buddies in user@domain format.

If the software is used on a server, one should simply point the appropriate DNS record of a domain to the server, and any session request made with either SIP or XMPP protocol will be bridged to the other side.

Initiatives and activities

Government and public sector

NLnet and its employees actively participate in various fora regarding the open internet and the implementation of open standards and open source in the public sector. A selection of the most prominent contributions:

- Coordination effort around Startup Europe together with our partners NESTA, Startup Weekend and Incyde;
- Participate in the European Commission-funded FI-WARE project.
- Attended the Digital Agenda Assembly in Dublin;
- Participated in a number of 'Cyber Dialogue' sessions at the Netherlands' Wetenschappelijke Raad voor Regeringsbeleid.
- Co-organised a workshop for governments around DKIM and DMARC together with Internet Society Netherlands, ECP and Forum Standaardisatie;
- Co-organised a workshop on Open Document Lifecycle with OpenDoc Society, Forum Standaardisatie and others
- Co-organised a workshop for governments events around DKIM and DMARC together with Internet Society Netherlands, ECP, Forum Standaardisatie;
- Coorganised a workshop on XForms with W3C Benelux and CWI
- Participated in the OpenForum Europe Summit;
- Participated in Cyber Future Search conference
- Participated in iSamenleving 2030 workshop (Netherlands Ministry of the Interior)
- Submitted a number of open standards (TLS 1.2, DANE and W3C widgets) to Forum Standaardisatie, the organisation that sets the standards for the Dutch Government;
- Various meetings at Netherlands ministries e.g. the Ministry of Foreign Affairs, Ministry of the Interior and Economic Affairs;
- Articles for Dutch online magazine for civil servants iBestuur;

Talks and booths

- Participated as a speaker in NLIGF
- Organised a track of talks about upcoming internet technologies at OHM 2013

Other

- Participated in the IAB workshop on **Internet Technology Adoption and Transition**
- Attended inauguration of NLnet's former chair and general director Teus Hagen into the **Internet Hall of Fame** in Berlin
- Attended the European Legal Network Conference
- Participated in the KPN Stakeholder Dialogue workshop
- Participate in ISO/IEC SC34 wg6 activities;
- Board membership of OpenDoc Society;
- Co-organised a workshop on CSS with web pioneer Bert Bos together with W3C Benelux.

Event sponsoring

Received requests

In 2013 NLnet granted three request for event sponsoring and one time donations.

Granted requests

NLnet was a sponsor of OHM2013: Observe. Hack. Make. An international technology and security conference in a unique form.

<http://ohm2013.org>

A donation was made to developer Sander Bos to provide travel costs to do a presentation at OHM about the discovery and subsequent fix of a security bug in OpenBSD's networking code.

<https://program.ohm2013.org/event/252.html>

Travel support for dr. Paul Gartner-Stephen (leader of the Serval Project) to attend and present at the International Summit for Community Wireless Networks (IS4CWN) in Berlin, October 2013.

<http://2013.wirelesssummit.org>