

Stichting NLnet Condensed Annual Report 2000

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1. Introduction

goal

The Articles of Association of Stichting NLnet define its goal as "fostering electronic information exchange and everything that is related to this and/or can be beneficial to this".

In the course of NLnet's history the goal has been narrowed down to stimulation of network technology research and development in the domain of internet technology.

Open Source requirement

The merge of NLnet's Internet Service Provisioning (ISP) activities in WorldCom (formerly UUnet) 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. To this purpose a wide range of internet-related projects are currently being funded for which Open Source licensing conditions, and in many cases the General Public License (also known as GPL or GNU license), hold.

NLnet projects

The projects undertaken by Stichting NLnet can be divided in:

- network research: e.g. IIDS, research on intelligent network technologies;
- network development and engineering. e.g. NLnet Labs, which focussed on secure DNS in 2000;
- *network technology exchange*: e.g. the international exchange programme ReX in cooperation with USENIX;
- network technology development/engineering "productising", focussing
 on concrete results: e.g. secure DNS service implementation
 (Bind V9), efficient and scalable distribution of free software and
 documentation (SIRS), safe and robust network infrastructure
 design for schools (schoolLAN), generator for natural language
 parsers (AGFL), PXE standard implementation (NILO), and
 logging report generator (LogReport);
- sponsoring of other "Open Source" or educational initiatives in the area of networking: e.g. Web contests (ThinkQuest and TwinSite-2000), open software development (FSF and ISC), and technology conferences (NLUUG SANE conferences).

In 2000 Stichting NLnet financed projects to the sum of €685.406 (compared to €446.345 in 1999). NLnet has budgeted €1.818.000 for projects in 2001, and a similar amount for 2002. Stichting NLnet as an organisation does not derive any direct benefits from the undertaken projects or their results.

upcoming projects

In 2000 three new projects have been defined and are expected to formally start early 2001:

- TimeWalker: a visualisation system for very large amounts of logging events and data. The total estimated effort is 1.5 fte, ending in November 2001;
- Adaptive Hypermedia for All (AHA): an adaptive web interface system. The first phase of this project will take a year and involves ~2 fte;
- ALIAS, a study of the legal aspects of the use of network agents and the implications for software development. The project is

expected to start in February 2001 and continue until early 2003, with in total \sim 2.4 fte.

projects renewed in 2001

The SIRS-2 project ended in December 2000. A third phase has been defined to develop more tools and support for the software developed.

The schoolLAN project has been a mostly technology driven project so far. Plans for 2001 aim to provide more nation wide organisational network support for this initiative in primary schools Because of the major changes in schoolLAN, this project is described in more detail in chapter 2.4 (*The schoolLAN project in the picture*).

2. Policy and projects

Stichting NLnet's primary goal is to stimulate new developments in network (internet) technology, improve existing technology and to encourage new applications of existing technology.

The Stichting has chosen to do this by supporting non-proprietary network-oriented projects.

2.1 Policy

policy

Stichting NLnet's methods to contribute to the development of new network (internet) technology, improvement of existing technology, and new applications of existing network (internet) technology are to:

- 1. (fully or partially) subsidise software development;
- 2. finance advanced scientific research into network technology, 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 internet knowledge development and knowledge exchange programmes between universities, colleges and research institutes.

Internet

Open Source public forum

All projects aim to develop, improve or apply network (internet) technology;

all results of projects are made freely available to the community, and are presented, if possible, at a suitable international conference.

The Governing Board decides whether a project proposal is of interest to and appropriate for Stichting NLnet, possibly after consulting the Advisory Board and/or other experts in relevant field(s).

2.2 **Projects in 2000**

SANE 2000

The NLUUG (http://www.nluug.nl), Stichting NLnet and USENIX (http://www.usenix.org) sponsored SANE 2000, the second System Administration and NEtworking Conference in Europe. SANE 2000 was organised by the Dutch UNIX Users Group (the NLUUG). The SANE 2000 conference (http://www.nluug.nl/events/sane2000/) was held from May 22 to May 25 2000 in the MECC in Maastricht, the Netherlands. The conference had a two-day tutorial programme (with full and half day tutorials) and a two-day technical programme. The conference attracted 555 participants, 74% Dutch, 22% European (non-Dutch, 22 different countries), and 4% from the US, Canada, Brazil and other non-European countries. A two-day trade show with 24 exhibitors was organised in conjunction with the conference.

Stichting NLnet is represented on the Board of Stichting SANE2000, a non-profit organisation (foundation) created solely for the purpose of this event. Stichting NLnet's representative is not only the treasurer but also provides financial and administrative support. In addition,



Stichting NLnet provided a loan/guarantee of over €18.000 for this event.

The conference was a success in more than one sense, including financially and technically. Stichting NLnet views this conference as a means to stimulate the dissemination and exchange of knowledge, in general, and to disseminate news about Stichting NLnet's activities, in particular.

The third SANE conference, SANE 2002 http://www.nluug.nl/events/sane2002/, to be held in the last week of May 2002, will again be supported by the NLUUG, Stichting NLnet and USENIX.

Internet Software Consortium (ISC)

DNCCEC reference impl. DND VC DIND VC

DNSSEC reference impl. BIND V9 BIND V9 is a completely new implementation of the BIND V8 software, the most commonly used version of DNS (Domain Name Service) software (RFC 1034 & 1035). BIND V9 addresses a.o. scalability (support for very large zones) and security (support for the DNSSEC standards: RFC 2535). This implementation project, coordinated by the Internet Software Consortium (http://www.isc.org), started at the end of 1998, and was initially funded by the US Department of Defence, five computer manufacturers (Digital, IBM, SUN, SGI en HP), Stichting NLnet, and a few others. When in mid-1999 the need for additional financing was recognised, NLnet provided a financial guarantee of US\$ 500.000 to ensure completion of the project while retaining the original goals of a public release under the (modified) BSD license.

The first beta release of the BIND version 9.0.0 software became available in September 2000, and was soon followed by a number of enhanced releases (May 2001 version 9.1.2 appeared). The Bind V9 version is a complete redesign with improved scalability (multi threaded implementation), and functionality mostly equal to or exceeding (zone signing part) that of BIND V8.

Recent security problems with the older BIND implementations (V4, V8) have significantly contributed to the increasing use of the new BIND V9. RedHat 7.1 (April 2001) was the first major Linux distribution with BIND V9 (version 9.1.0) as standard DNS service.

The NLnet guarantee was originally planned to expire on December 1, 2000, having been reduced already by earlier and other donations to US\$ 175.000. The expiration date has been extended to April 1, 2001, to provide more time to ISC to fund its claim.

Teus Hagen is a member of the Board of Directors of ISC, representing Stichting NLnet.

Bind V9 documentation

At the end of 1999 NLnet recognised the need for additional documentation of BIND V9, and initiated a project for this purpose together with ISC. Stichting NLnet guaranteed funding; ISC managed the project and content. Jim Reid started in January 2000, but transferred to Nominum half way through. (Nominum is the company that writes the BIND V9 software for ISC). The guarantee for funding is no longer applicable. The current BIND V9 software includes the so-called Administrative Reference Manual (ARM). Several handbooks have been updated with BIND V9 information.

Scalable Internet Resource Service (SIRS)

alternative for ftp

SIR Service is an application of the GLOBE software developed in a research context by the Computer Systems Group at the Vrije Universiteit Amsterdam (Andy Tanenbaum and Maarten van Steen - see http://www.cs.vu.nl/globe). SIR Service was defined in December 1998 to be "a distributed alternative for existing anonymous ftp file services, based on GLOBE". SIRS was originally planned to be a two year project running from December 1998 until December 2000, and sponsored by NLnet for in total ~2 fte plus equipment and management.

In the first year SIRS delivered a non-distributed name server and client proxy. A simple first solution to enable downloads from distributed resources. The second year plan of SIRS consisted of a prototype implementation for a distributed SIRS resource service. The server and the complete service software distribution were delivered in 2000 (the second phase of the project), according to plan: the first alpha-release of the complete system in September, the second in December. NLnet tested both releases, including a number of intermediate releases. The software will be made publicly available (under BSD license) in January 2001 as the so-called Globe Distributed Network (GDN), a collection of servers and client-side components that allow a user to distribute and replicates packages of files. The NLnet contribution for this project in 2000 was €131.029.

The current software implementation has three important limitations: it is neither secure nor failsafe and system management tooling is lacking. A follow-up project has been devised and approved to cover the drawbacks of SIRS: SIRS-3, in which security (traceability and access control), and a robustness model (crash and communication recovery) will be implemented together with better management tooling (site, global system and content management). In addition, more extensive beta testing of the software will be done. This project will require funding of two programmers for one year, amounting to a total of € 145.209.

NILO

Open Source PXE network boot

NILO is a project initiated by Stichting NLnet in 1999 to develop public domain source code implementation of the PXE standard for Network Interface Cards (NIC) defined by Intel. This project (originally estimated to be 15 weeks' work, started in February 1999 and planned to end before October 1999) is fully funded by Stichting NLnet – for the details see http://www.nilo.org. A low-level technical problem has caused a deadlock situation. This problem blocked the progress (one third of the project still needs to be finalised) during all of 2000. In July 2000 an award (a bounty of US \$ 1000) for a solution was announced, but this had little effect in 2000. (Note: There have been recent developments (April 2001), which may lead to a successful completion of this project later in 2001.) The Etherboot and Netboot e-mail list groups are all looking forward to the results of this NILO project.

schoolLAN

safe and robust network cluster

The schoolLAN project (previously named Primary EDUlan) focuses on the development of a small robust centralised network for (primary) schools.

SchoolLAN initially started in 1999 as a technical concept and tools for configuration development by NLnet in co-operation with four

primary schools in two regions in the Netherlands. This technical design has been extended in 2000 to a technical configuration concept and support organisation for primary schools across the country. The regional support organisations are being developed together with regional teacher training colleges and vocational training colleges (which specialise in IT). An interregional platform is planned to guide and streamline schoolLAN developments for 2001. See the special section 2.4 (*The schoolLAN project in the picture*) on this project in this report, and http://www.schoollan.nl for more information. NLnet is planning on supporting the regional and interregional schoolLAN management and co-ordination efforts, starting in January 2001 in Arnhem and hopefully extending to Venlo, Hoorn, and Zwolle in the course of 2001.

Stichting NLnet has registered the trademark schoolLAN in the Benelux to prevent misuse by other parties. The total cost of schoolLAN for NLnet was € 6.297 in 2000. For 2001 an amount of € 250.000 has been budgeted.

ThinkQuest webcontest

Stichting ThinkQuest Nederland (a not-for-profit organisation) was founded by Stichting NLnet and SURFnet BV at the end of 1999 to promote the use of Internet in education and to stimulate the development of educational internet applications. ThinkQuest Nederland (http://www.thinkquest.nl) participates in the international ThinkQuest programme.

The Board of Directors had 4 members: Boudewijn Nederkoorn (SURFnet BV), Frances Brazier (Stichting NLnet), Aad van der Niet (BVEnet) and Rob Rapmund (consultant for the Department of Education and Science, O&W).

Pien Voortman is the executive director of Stichting ThinkQuest Nederland. Extra sponsorship (including a large sum of money for prizes) from the Ministry of Education provided an enormous impulse to the organisation in the Netherlands. In addition to the ThinkQuest International (for 12-19 year olds), new national ThinkQuest programmes were initiated and run: ThinkQuest for secondary school students (for all secondary school children), ThinkQuest Junior (for grades 4-6), ThinkQuest for Teachers (teacher training colleges). New activities and programmes for 2001 have also been devised (including workshops for teacher training colleges, and an art contest). ThinkQuest's staff (currently a director and 2 employees) will be extended in 2001 to make this possible.

The effort put into PR in 2000 together with a number of commercial parties (including radio stations) was successful. The awards event on October 18, 2000 in the Mediapark Event Studio in Hilversum was well attended.

TwinSite-2000
Website contest

Stichting NLnet supported an international contest, initiated by the Vrije Universiteit for secondary school students that resembled ThinkQuest to some extent: a Dutch team worked together with a TwinTeam from another country to develop a website (see http://www.cs.vu.nl/TwinSite-2000). The goal was to focus the attention of secondary school students on academic opportunities within Computer Science. Stichting NLnet provided the first prize of €4.500, which was awarded to TwinTeam 20 for their site "Europe 2084"; the team was formed by students from Groene Hart Lyceum

in Alphen aan de Rijn, the Netherlands and from Pyhdjoen Lukio in Pyhdjoki, Finland.

ReX

research exchange programme

In the summer of 1999 a unique programme has been started together with USENIX supporting international research and development: the Research Exchange Programme (ReX), http://www.NLnet.nl/projects/rex/. This programme aims at facilitating the exchange of technology between research institutes world wide, working on computer software projects, especially those involving network technology and open systems. Research groups with complementary, but (strongly) related research foci can gain from collaborating with each other, broadening the potential scope of results. All results are to benefit the community and freely available: all software is to be open source.

In 2000, the first year of ReX, two successful exchanges have taken place: one between the Vrije Universiteit Amsterdam and the University of Colorado, Boulder (bringing GLOBE location service technology to Boulder, January to October 2000), and one between the Vrije Universiteit Amsterdam and CAIDA in San Diego (bringing more insight in internet behaviour in wide area setting to Amsterdam, September 2000 to February 2001). The two grant proposals are available on the ReX website as examples.

A brochure for the ReX programme has been designed, produced, and distributed at all relevant USENIX (and other) events. More awareness for ReX is, however, needed.

The members of the ReX Steering committee, responsible for this programme, are:

Evi Nemeth and Peter Honeyman (USENIX),

Frances Brazier (chair) and Teus Hagen (Stichting NLnet), Mike O'Dell (neutral).

There is administrative support from USENIX and NLnet. The committee's task is to initiate and evaluate proposals, and to monitor and evaluate the ReX exchange projects.

At the end of 2000 four new ReX exchanges proposals were underway. USENIX and NLnet will each make available € 100.000 for the ReX programme in 2001.

Interactive Intelligent Distributed Systems (IIDS)

network/agent research project

December 9, 1999 Stichting NLnet and the Department of Sciences of the Vrije Universiteit Amsterdam formally agreed on long-term collaboration. Stichting NLnet has agreed to fund a new research group at the VU on Intelligent Interactive Distributed Systems (IIDS, http://www.cs.vu.nl/iids) for the coming ten years.

The VU has created an additional professorial chair for this group. Frances Brazier has been awarded this chair as of January 1, 2000.

focus

The group's research directive is to focus on the need for systems' support for the development of large-scale agent systems. Research in the first year has been primarily exploratory, resulting in a more detailed research programme for the coming years. This programme



distinguished three main lines of research: (1) middleware (an agent operating system and an agent environment), (2) services (including an agent factory, directory services and management tools), and (3) distributed applications to explore requirements and to test results. Three research assistants financed by the VU, one research assistant funded by NLnet, a guest from Georgia University of Technology (USA), and 5 MSc students working on their theses, explored preliminary ideas during the course of the year. One PhD student, who started in 1999, worked on a new paradigm for the web in a collaborative project between IIDS and the Computer Systems Group at the VU (Maarten van Steen and Andy Tanenbaum). An initial design document for the new paradigm was written in 2000.

The first full-time researcher, Niek Wijngaards, joined the group in February. In 2000 his tasks were to help define the detailed research programme, and to explore the feasibility of a number of new ideas with the above mentioned students. In general students are enthused by the new line of research (partly due to a course given by Brazier and Wijngaards) and many have expressed interest in PhD positions. Finding 2-4 good PhD students in 2001 to further develop the lines of research mentioned above should not be difficult. Advertisements for a new researcher and a programmer have been posted and a number of interesting candidates have replied.

NLnet has contributed € 200.000 in 2000 to support the IIDS group. For 2001 a contribution of € 309.534 has been approved, but subject to reduction by the unused portion of NLnet's contribution in 2000 (€ 101.377).

NLnet Labs

network development laboratory

Stichting NLnet Labs was formally established on December 28, 1999 with the following Board of Directors: Teus Hagen, Wytze van der Raay and Frances Brazier. Stichting NLnet Labs' mission is to (further) develop Open Source Software for the Internet and all other related scientific developments. The laboratory, a long-term development environment for up to six people, is fully financed by Stichting NLnet, for a total of € 234.165 in 2000. It is situated in Amsterdam in one of the Matrix buildings of the ASP (Amsterdam Science Park), and started with two employees on January 1 2000. Ted Lindgreen is the executive director.

The first topic approached by NLnet Labs is DNSSEC, application and feasibility of the managements aspects of secure DNS in larger top level domains for e.g. national naming authorities (ccTLD's), cooperating within CENTR (council of European Top-Level Domain Registries).

NLnet Labs has shown and proven that DNSSEC can be used successfully at this level (.nl, .de and .se ccTLD's). The work has been done in cooperation with SIDN (Dutch ccTLD).

For this NLnet Labs work, and new related topics (IPv6) new staff will be sought in 2001. See http://www.nlnetlabs.nl for more information. In 2000 NLnet Labs employed three people. NLnet Labs publishes its own annual report.

AGFL

parser generation for natural language Finding information on the internet is not always easy. Good natural language interfaces could make it easier to search for information, and improve the quality of the results.

The aim of the AGFL project: Affix Grammars over a Finite Lattice (Katholieke Universiteit Nijmegen, Prof. Kees Koster), is to further development of results of research in the area of grammar development for natural language, and tools to support automatic generation of efficient parsers for such grammars. The results are meant to be made of use to the software development community as a whole. The AGFL application example included in the project plan is to deliver web document classification software (for the English language); this should illustrate the value of such tools for internet-based information retrieval. The AGFL software is being made available as Open Source under GNU General Public licensing. See http://www.cs.kun.nl/aqfl/ for more information.

The AGFL project started in January 2000 and ends in September 2001. It involves about 22 months of software engineering. The first beta release of the AGFL parser generator software is expected to be available in January 2001. NLnet sponsoring for 2000 amounted to €68.260 (the total cost of the project is €113.768).

Free Software Foundation (FSF)

The Free Software Foundation is renown for its efforts in the area of open source software development: GNU software and licensing policy. Stichting NLnet donated US\$ 10.000 to support this work. NLnet intends to donate a comparable amount next year. More details on FSF can be found at http://www.fsf.org.

Stichting LogReport exploring log files

A group of enthusiastic software developers, including Anton Holleman and Joost van Baal, approached Stichting NLnet in April 2000 with a plan for a new initiative in the area of report generation. The purpose of this initiative is to develop a system with which useful reports can be generated from the various system logs of (network) activity. Stichting LogReport was founded in August 21, 2000 to support these activities. The members of the Board of Directors of Stichting LogReport are: Teus Hagen (chair, Stichting NLnet), Wytze van der Raay (treasurer, Stichting NLnet) and Jakob Schripsema (secretary, neutral).

After several months of volunteers-only efforts, Joost van Baal joined LogReport as its first part time employee (0.6 fte) in November 2000. The first experimental release of the report generator software was released in October 2000. Stichting LogReport maintains its own web site (http://www.logreport.org), where the software can be downloaded and the report generation service can be tried.

Stichting LogReport is fully sponsored by NLnet for the first two years. The total amount of NLnet sponsoring in 2000 was € 18.472 NLnet expects to sponsor Stichting LogReport in 2001 with € 140.000, based on employment of approximately 1.5 fte during the year. Stichting LogReport publishes its own annual report.

2.3 Other activities in 2000

Stichting NLnet is continually in pursuit of new projects. To this purpose NLnet maintains relations with organisations such as USENIX, NLUUG, RIPE, NLIP, ISOC and SURFnet.

Relations with universities are another potential source of projects. A number of universities (Utrecht, Nijmegen, Tilburg, Amsterdam, Enschede and CWI Amsterdam) were visited in 2000. On a more personal base, universities in Berlin, London, Oslo, Berkeley, Tromso, Colorado, San Diego, and other cities have been approached.

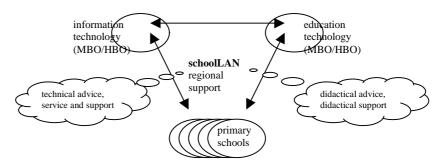
2.4 The schoolLAN project in the picture



The project schoolLAN ™ originally started in 1999 by a small group of network specialists as a purely technical driven project in order to provide a robust and efficient computer network infrastructure for (primary) schools. A reference network configuration for small scale network environments with the following aspects:

- Low costs, simplicity, robustness, full sharing of resources and remote management of the systems and network.
- A single server network from which (re)installations of the workstations can be made within a few minutes (on the turn of the power key).
- Design and developments from out of the working environments.
- Open Source (GNU General Public License model) in order to provide an Open continued development base, not only for the computer technical part, but as well for the (digital) educational part.

At the end of 1999 schoolLAN V1.0 became fully operational at four (test) schools in two different locations (Grubbenvorst and Hoorn) as a technical network system. A Linux based server (PC computer) served 15-20 Windows (Win3.11 and Win95/98) clients. Internet access was available via ISDN dialin/out lines and secured by the UNIX server.



The technical results made clear that educational and organisational aspects needed to be considered and that long term support and development was needed. SchoolLAN has attracted the attention of regional teacher training colleges and vocational training colleges (which specialise in IT), as an interesting project for practical

development and engineering work. In 2000 NLnet started to seed schoolLAN organisational initiatives in five regions: teacher training colleges, vocational training colleges and primary schools working together to establish the schoolLAN concept in primary schools. This experience would hopefully make it possible to roll the concept out to more schools and to establish a support centre within each region, co-operating with the colleges, to form a local base for the long term schoolLAN developments and local support. At the end of 2000 schoolLAN initiatives were active in Venlo (Prisma primary schools and Fontys College), Hoorn (de Windvaan schools and Horizon College), Arnhem (four public schools and Rijn IJssel College) and Zwolle (four public schools, the ICT Co-ordination Centre and a company, Systeam). In January 2001 the first formal one year project contract will most likely be signed between NLnet and MicroFox (Ruud Suk) to provide the necessary management and co-ordination support for the regional efforts in the Arnhem region and the interregional initiative.

Stichting NLnet has expressed its desire to sponsor the management and co-ordination activities for schoolLAN in these (five, one region is vacant) regions in order to establish the long-term schoolLAN developments and support activities at the regional level. In addition Stichting NLnet expects to support an interregional schoolLAN initiative to co-ordinate and initiate regional activity. Stichting NLnet expects to sponsor these schoolLAN activities with a maximum of € 400.000 in total.

The aims of schoolLAN are:

- To develop a cookbook describing how to set up, maintain and support a local network attached to Internet for (primary) schools
- To develop software and materials to support teachers in the typical administrative work in primary school environments
- To establish an organisational movement built on top of schoolLAN in order to provide continuity and publicly accessible feedback and improvements on the longer term.

A detailed overview of schoolLAN can be found at http://www.schoolLAN.nl. The detailed schoolLAN report (in Dutch language) can be obtained via http://www.schoolLAN.nl/documentation/schoolLAN_V2.0.pdf.

It is clear that a professional technical network solution needs to be accompanied by good educational software and school oriented administrative support software. Significant developments are still needed in this area (especially with respect to the ways in which such software can be installed in different network environments). The Open Source development model, which can boost such developments, is unknown in the Dutch "(primary) school world" (a culture shock sometimes in these environments).

3. Stichting NLnet organisation

Number Nu

foundation) on 27th of February 1989, and is situated in Amerongen, the Netherlands. It is registered at the Chamber of Commerce, Amsterdam under number 41208365. In 1999 Stichting NLnet changed its Articles of Association to obtain a full non-profit status

(so-called Article 24 status, "algemeen nut status").

NLnet Labs and LogReport 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 her more specialized projects. In 2000 the foundations Stichting NLnet Labs and Stichting LogReport Foundation, both directed in full or in part by Stichting NLnet, played such a role for NLnet. Both Foundations have also applied for and obtained a full non-profit tax

status.

Governing Board The Governing Board of Stichting NLnet consists of:

Chair: Teus Hagen teus@NLnet.nl

Finances: Wytze van der Raay wytze@NLnet.nl Secretary: Frances Brazier frances@NLnet.nl Board member: Jos Alsters jos@NLnet.nl

operations For the daily operations a Board of Directors has been selected from

the Governing Board:

General director: Teus Hagen (full time)

Financial director: Wytze van der Raay (full time) Research director: Frances Brazier (part time).

Frances Brazier has a part time function of full professor at the Vrije

 $\label{thm:continuous} \mbox{Universiteit (IIDS research group) of Amsterdam}.$

The Governing Board of Stichting NLnet is supported by an Advisory

Board of three persons:

Advisory Board advisor technology: Paul De Bra, full professor, University of

Eindhoven;

advisor legal affairs: Anne-Marie Kemna, consultant, eVentures

Europe;

advisor finances: Erik Esseling, vice-president, Cap Gemini Ernst &

Young Nederland.

For external (financial and legal) advice and consultancy Stichting NLnet is supported by CMS Derks Star Busmann Hanotiau (legal, tax and notary advice), PriceWaterhouseCoopers (accountancy, and salary affairs), and Lombard Odier (investment management).

4. Finances

means Stichting NLnet finances its projects and activities from the revenues

obtained from its invested capital. If possible, also subsidies from the government and/or third parties will be used for project activities, but

to date this has not been the case.

4.1 Fiscal status

tax exemptions Stichting NLnet has not been running a commercial company since

mid 1994, and does not plan to do so in the future. Therefore the foundation is not subject to Value Added Tax (BTW in Dutch), and also not subject to company tax (vennootschapsbelasting in Dutch).

general benefit status As of March 9, 1999, Stichting NLnet has been classified at its request

by the Dutch tax office (Department Registratie en Successie) as an entity with general benefit objectives within the meaning of the

Successiewet 1956 (article 24 sub 4).

foreign taxes In addition to this, Stichting NLnet obtained a so-called place of

residence declaration (woonplaatsverklaring) from the Dutch tax office for companies on June 8, 1999. This declaration enables the foundation to reclaim part of the foreign taxes withheld on foreign

dividends.

Stichting NLnet Governing Board, June 2001

