SWITCH

The Swiss Education & Research Network

AAI – Authentication and Authorization Infrastructure

Exhibit 1
Glossary

Document management

Version/status:	0.91 / draft	1.10	1.12
Date:	13.2.2004	19 May 2004	7 July 2004
Author(s):	Nicole Beranek Zanon	Ueli Kienholz	Ueli Kienholz
	Hans-Rudolf Trüeb	Hans Rudolf Trüeb	Hans Rudolf Trüeb
	Prager Dreifuss		
File name:	040213_Anhang_1.doc	X1035088.doc	X1056351.doc
Replacing:		V. 091	V. 1.10
Approved by:			

AAI	means Authentication and Authorization Infrastructure
AAI Participant	Home Organization, Resource Owner or Service Provider
AAI Services	means (i) the development and operation of the central AAI system, including the operation of the WAYF server and the coordination of the federation members' WAYF servers; (ii) the operation of a competence center (test lab, training, consulting); (iii) the development of generic add-ons to Shibboleth; (iv) the development and implementation of AAI tools; and (v) strategy and marketing, all as further set forth in Exhibit 2
AAI Service Provider	Organization providing central AAI services to Resource Owners and Home Organizations
Additional AAI Services	means (i) integration services, comprising the integration of Resources of the Home Organizations; (ii) AAI jump start services, i.e. temporary support for a limited number of Resources and End Users and support for Home Organizations joining the Federation; (iii) outsourcing services, i.e. the permanent outsourcing of certain functions and Services from the Home Organization to SWITCH; and (iv) Virtual Home Organization services, i.e. operation of a Virtual Home Organization for End Users without "formal" relation to a Home Organization, all as further set forth on SWITCH's AAI Website
Advisory Committee	The Advisory Committee, representing the Federation members and SWITCH, acts in a purely advisory capacity as regards the management of inter-institutional AAI projects and the long-term AAI strategy.
Affiliate	means, as to a person or entity, another person or entity which exercises Control over such person or entity, or is under Control by it, or is under common Control by the same person or entity
Attributes	End User data needed for access control decisions
Authentication	Process of proving the identity of a previously registered End User
Authorization	Process of granting or denying access rights for a resource to an authenticated End User
Control	shall be deemed to exist if a person or entity (either alone of with its Affiliates) owns more than half of the voting rights and equity capital of another entity or is otherwise able to exert a controlling influence over another entity
Dependencies	means the technical pre-requisites which the systems of the AAI Members should meet

End User	means a registered member of a Home Organization or a Virtual Home Organization
Federation	means a group of organizations which cooperate in the area of inter-organizational authentication and authorization and, for this purpose, operate a common infrastructure, it being understood that the term "Federation" whether used alone or in conjunction with other words shall be descriptive only and shall not indicate any association, joint venture, partnership or other legal structure of the members thereof
Federation Member	means the contracting party with SWITCH who abides the policy
Force Majeure	means, in relation to either Party, any event beyond its reasonable control including any strike, act of God, natural disaster, fire, war, riot or national turmoil
Home Organization	means participating institutions such as universities or hospitals which register End Users, it being understood that the Federation members may have several Home Organizations
Meta-data	Technical and administrative data about Home Organizations and Resources
Operations Committee	The Operations Committee, representing the Federation members and SWITCH, acts in a purely advisory capacity as regards short-term decisions and operational or technical issues.
Registration	Process of becoming an official member of a user community. During the registration, a person has to prove his/her identity
Related Service	means additional service which does not have a compulsory link to AAI Services
Resource Owner	means the entity owning a resource and offering resource access to End Users
Resources	means material to which access is granted, e.g. applications, websites, databases, systems, etc.
SWITCH IP	means the AAI concept, the know-how, the documents, the tools and the software employed, delivered or developed by SWITCH as part of the Service delivery
SUK	Schweizerische Universitätskonferenz
Virtual Home Organization	means a user directory that allows Resource Owners to register End Users that are not otherwise registered with a Home Organization, allowing these End Users to access certain Resources
WAYF-Server	"Where-Are-You-From"-server, means a register of meta-data describing the AAI Federation's authentication services used by Resources

AAI – Authentication and Authorization Infrastructure

Exhibit 2
AAI Services
(Base Package) and
Dependencies

Document management

Version/status:	0.91 / draft		1.0 / final	
Date:	13.2.2004		7. July 2004	
Author(s):	Nicole Beranek Zanon	SWITCH	Thomas Lenggenhager	SWITCH
	Daniela Isch	at rete ag		
	André Redard	at rete ag		
File name:	040213_Anhang_2.doc		040707_Exhibit_2.doc	
Replacing:			0.91	
Approved by:				

1. Service Description AAI Base Package

The AAI Base Package covers central services necessary for running an AAI and is available to Home Organizations as well as all Resource Owners belonging to a Home Organization. It comprises the following tasks:

1. Center of Competence

    SWITCH operates a test infrastructure to check new components and build up know-how it can share with other organizations as well as to provide a test Home Organization, Resource and WAYF-server which organizations can use as a counterpart for testing their own installations.

    SWITCH organizes information events, creates deployment guides and generally furthers the know-how transfer among the AAI Members.

    SWITCH coordinates both the Advisory and the Operations Committee.

    Moreover, SWITCH establishes regular contacts with the developers of Shibboleth in order to coordinate AAI issues and to introduce AAI-specific requirements.

2. WAYF-Server

    SWITCH operates the central WAYF-server, a register of meta-data describing the AAI Federation's authentication services used by Resources. In addition, SWITCH is responsible for the coordination of all the WAYF-servers in the Federation operated by individual organizations.

3. AAI Tools

    SWITCH develops and implements special AAI tools that facilitate the integration of resources such as AAI Proxy or AAI Portal, or enable an efficient operation of the AAI components such as a resource registry.

4. Strategy and Marketing

    SWITCH is responsible for the strategic, well-coordinated further development of the AAI as well as adequate AAI marketing initiatives, both nationally and internationally, in order to ensure that the AAI Members' changing requirements are met as much as possible, and that both existing and prospective AAI Members learn about the possibilities and advantages of the AAI.

Special services for individual organizations have to be ordered separately.

2. Obligations and Dependencies of Federation Members

The following requirements must be met by the Federation Members for the proper functioning of the Services:

1. Home Organizations will install and operate the AAI elements and integrate them with their authentication systems and user directory.

2. Resource Owners will install and operate the AAI elements and integrate them with their resources.

3. Home Organizations collect a specified minimum set of attributes at the registration of end users (see "Authorization Attribute Specification", version 1.1 of January 15, 2004).

4. Home Organizations and Resource Owners will install and update new AAI software releases according to the agreed schedule maintained by the Operations Committee.

5. SWITCH provides a software repository covering all AAI components that are available for Federation Members.

6. Home Organizations inform SWITCH about any changes of their meta-data stored in SWITCH's WAYF-server in due time.

7. Home Organizations indicate technical and administrative contact information to SWITCH.

8. Resource Owners indicate technical and administrative contact information to SWITCH.

9. SWITCH takes the necessary steps to ensure seamless operation of the services under its control, monitors service availability and operates a helpdesk for Federation Members to report operational problems. Outages due to planned maintenance operations will be announced in advance and should be restricted to maintenance windows previously agreed by the Operations Committee.

10. SWITCH informs AAI Participants of bug fixes, security updates and upgrades of AAI components and coordinates efforts to keep the AAI operational and secure.

11. Federation Members use server certificates provided by an accredited CA for all their AAI elements.

AAI - Authentication and Authorization Infrastructure

Exhibit 3
AAI Policy

Document management

Version/status:	0.91/draft		1.12
Date:	3. 2. 2004		7 July 2004
Author(s):	Nicole Beranek Zanon	SWITCH	Hans Rudolf Trüeb
	Christoph Graf	SWITCH	
	Daniela Isch	at rete ag	
	André Redard	at rete ag	
File name:	040603_Anhang_3.doc		X1055939.doc
Replacing:	AAI Policy 1.0 / 6-FEB-03		V. 0.91
	SWITCHaai Federation 0.5 / 10-NOV-03		
Approved by:			

Table of Content

1. Introduction

Establishing an AAI to ease interactions between End Users and Resources across organizations not only requires a legal framework which allows participants to exchange information, but also the mutual trust of organizations.

The AAI bases on legal regulations already in force[1] and participants in the AAI can only act within these boundaries. The standing orders of the SUK of February 22, 2001 ease additional cooperation. However, it is also necessary that AAI Service Provider, Home Organizations and Resource Owners agree to a common set of guidelines – the AAI Policy – which describes the rules of good conduct.

The policy is an integral part of the AAI Service Agreement between SWITCH and the signing Organization and rules the relationship between the AAI Participants.

2. The SWITCHaai Federation

2.1   Definition

The SWITCHaai Federation is a group of organizations which cooperate in the area of inter-organizational authentication and authorization and, for this purpose, operate a common infrastructure.
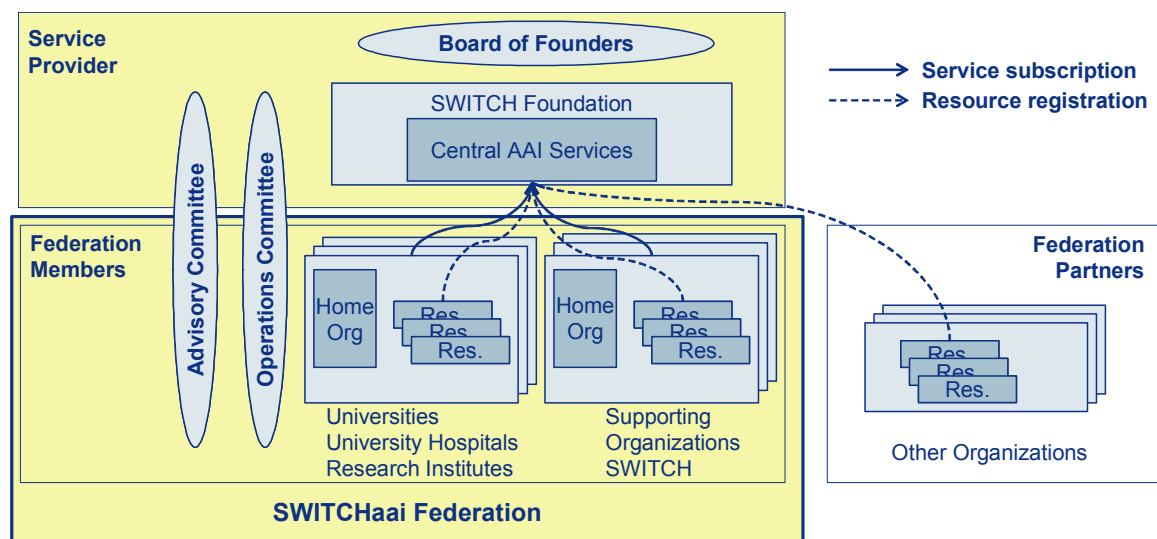
2.2   Participants

Figure 1: The SWITCHaai Federation and related organizations

---

[1] - Federal and the different cantonal data protection laws

- Bundesgesetz über die Förderung der Universitäten und über die Zusammenarbeit im Hochschulbereich vom 8. Oktober 1999 (UFG)
- Verordnung zum Universitätsförderungsgesetz vom 13. März 2000 (UFV)
- Interkantonales Konkordat über die universitäre Koordination vom 9. Dezember 1999
- Vereinbarung zwischen dem Bund und den Universitätskantonen über die Zusammenarbeit im universitären Hochschulbereich vom 14. Dezember 2000
- Cantonal university laws comprising the legal basis for the handling of personal data
- Cantonal acts of public responsibility governing the abuse of the AAI

2.2.1   Federation Members

All entities and organizations meeting the *Membership Requirements* as posted on the dedicated SWITCH AAI website and amended from time to time, may become Federation Members. Any revision of these *Membership Requirements* will become effective and will be deemed accepted 30 days from posting on the SWITCH AAI website. Then current Federation Members will receive an electronic message indicating such revision. Members can have different roles: they can act as representatives of user communities (Home Organizations), offer a variety of resources to the Federation (Resource Owners) and operate AAI components.

2.2.2   Service Provider SWITCH

SWITCH provides the Services according to Exhibit 2.

2.2.3 Advisory Committee

The Advisory Committee, representing the Federation members and SWITCH, acts in a purely advisory capacity as regards the management of inter-institutional AAI projects and the long-term AAI strategy.

2.2.4 Operations Committee

The Operations Committee, representing the Federation members and SWITCH, acts in a purely advisory capacity as regards short-term decisions and operational or technical issues.

2.2.5   Federation Partners

Federation Partners are organizations that offer AAI-enabled Resources to Federation members. They are allowed to integrate their Resources within the AAI and to use a minimal set of central AAI services necessary for a smooth operation of the AAI.

Federation Partners cannot act as a Home Organization, i.e. they do not represent user communities.

Service subscriptions of Federation Partners are subject to separate agreements with SWITCH.

3. Policy

3.1   Advisory Committee

3.1.1   SWITCH decides on the membership composition of the Advisory Committee. Ideally, the Committee is composed as follows:

    (a) one representative of the universities

    (b) one representative of the universities of applied sciences

    (c) one representative of SWITCH

    (d) one representative of CRUS

    (e) one to three representatives of important Resource Owners (e.g. Library Consortium, SVC)

    (f) one representative of the provider of subsidies

    (g) one jurist familiar with AAI-related legal issues

3.1.2   The Advisory Committee acts in a purely advisory capacity as regards the management of inter-institutional AAI projects and the long-term AAI strategy including but not limited to the following issues:

(a) initiation and controlling of inter-institutional AAI projects;
(b) financing of AAI projects and operations;
(c) Federation strategy (membership, relation to other federations, etc.);
(d) AAI strategy (architecture, functionality);
(e) policies and business rules;
(f) accreditation of CAs (Certificate Authorities);
(g) risk assessments and service continuity management; and
(h) further development of SWITCH' s AAI Services.

3.1.3 SWITCH is responsible for the preparation of meetings and for all administrative concerns.

3.2 Operations Committee

3.2.1 SWITCH decides on the membership composition of the Operations Committee. Ideally, the Committee is composed as follows:

(a) one representative per Federation Member
(b) if needed, experts with specific skills

3.2.2 The Operations Committee acts in a purely advisory capacity as regards short-term decisions and operational or technical issues including but not limited to:

(a) best practices on AAI-related technical, operational and security issues;
(b) attribute specification, common entitlements; and
(c) release planning.

3.3 Home Organizations

3.3.1 Home Organizations have the obligation to disclose their registration and authentication process on request of an AAI Participant.

3.3.2 Home Organizations operate a help desk for their End Users which attends to AAI-related issues.

3.3.3 Home Organizations keep their Attribute Release Policy up to date for all Resources that the Home Organizations' user communities are entitled to access.

3.3.4 Home Organizations will use for all their AAI elements server certificates provided by an accredited CA.

3.3.5 Home Organizations keep authentication information according to the legal provisions for at least 6 months at the moment.

3.4 Resource Owners

3.4.1 Resource Owners indicate which attributes they need for authorization; these indications are entered into the Resource Registry.

3.4.2 Resource Owners ensure that the meta-data they use is always up to date by using the automatic updating service provided by Shibboleth.

3.4.3 Resource Owners keep login information and log files according to the legal provisions for at least 6 months at the moment.

3.4.4 Resource Owners will use for all their AAI elements server certificates provided by an accredited CA.

3.4.5 In case of End User abuse, the abused party gets hold of the abuser. Resource Owners provide log information to the Home Organization on request.

AAI - Authentication and Authorization Infrastructure

Exhibit 4
Software Licenses

Document management

Version/status:	final	1.0 / final
Date:	13. 2. 2004	7. July 2004
Author(s):	Nicole Beranek Zanon SWITCH	Nicole Beranek Zanon SWITCH
File name:	040213_Anhang_4.doc	040707_Exhibit_2.doc
Replacing:		
Approved by:		

Table of Content

1. OpenSAML License

The OpenSAML License, Version 1.
Copyright (c) 2002
University Corporation for Advanced Internet Development, Inc.
All rights reserved

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution, if any, must include the following acknowledgment: "This product includes software developed by the University Corporation for Advanced Internet Development <http://www.ucaid.edu>Internet2 Project. Alternately, this acknowlededgement may appear in the software itself, if and wherever such third-party acknowledgments normally appear.

Neither the name of OpenSAML nor the names of its contributors, nor Internet2, nor the University Corporation for Advanced Internet Development, Inc., nor UCAID may be used to endorse or promote products derived from this software without specific prior written permission. For written permission, lease contact opensaml@opensaml.org Products derived from this software may not be called OpenSAML, Internet2, UCAID, or the University Corporation for Advanced Internet Development, nor may OpenSAML appear in their name, without prior written permission of the University Corporation for Advanced Internet Development.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND WITH ALL FAULTS. ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT ARE DISCLAIMED AND THE ENTIRE RISK OF SATISFACTORY QUALITY, PERFORMANCE, ACCURACY, AND EFFORT IS WITH LICENSEE.
IN NO EVENT SHALL THE COPYRIGHT OWNER, CONTRIBUTORS OR THE UNIVERSITY CORPORATION FOR ADVANCED INTERNET DEVELOPMENT, INC. BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

2. Shibboleth License

The Shibboleth License, Version 1.
Copyright (c) 2002
University Corporation for Advanced Internet Development, Inc.
All rights reserved

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution, if any, must include the following acknowledgment: "This product includes software developed by the University Corporation for Advanced Internet Development <http://www.ucaid.edu>Internet2 Project. Alternately, this acknowledgement may appear in the software itself, if and wherever such third-party acknowledgments normally appear.

Neither the name of Shibboleth nor the names of its contributors, nor Internet2, nor the University Corporation for Advanced Internet Development, Inc., nor UCAID may be used to endorse or promote products derived from this software without specific prior written permission. For written permission, please contact shibboleth@shibboleth.org

Products derived from this software may not be called Shibboleth, Internet2, UCAID, or the University Corporation for Advanced Internet Development, nor may Shibboleth appear in their name, without prior written permission of the University Corporation for Advanced Internet Development.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND WITH ALL FAULTS. ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT ARE DISCLAIMED AND THE ENTIRE RISK OF SATISFACTORY QUALITY, PERFORMANCE, ACCURACY, AND EFFORT IS WITH LICENSEE. IN NO EVENT SHALL THE COPYRIGHT OWNER, CONTRIBUTORS OR THE UNIVERSITY CORPORATION FOR ADVANCED INTERNET DEVELOPMENT, INC. BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

3. Curl License

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1996 - 2003, Daniel Stenberg, <daniel@haxx.se>.

4. Log4cpp License

GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc. 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA
Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the

GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

  Although the Lesser General Public License is Less protective of the
users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.
Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library.

b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

 (For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not sup-ply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written en-tirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

  3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

  4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you

accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License.
Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.
If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of pre-

serving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EX-PRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAM-AGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAM-AGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
   Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA
Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!

5.   OpenSSL License

LICENSE ISSUES
==============
The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts. Actually both licenses are BSD-style Open Source licenses. In case of any license issues related to OpenSSL please contact openssl-core@openssl.org.

OpenSSL License
==============

/* ===
Copyright (c) 1998-2002 The OpenSSL Project. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. All advertising materials mentioning features or use of this software must display the following acknowledgment:
„This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (http://www.openssl.org/)"

4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact penssl-core@openssl.org.

5. Products derived from this software may not be called "OpenSSL" nor may "OpenSSL" appear in their names without prior written permission of the OpenSSL Project.

6. Redistributions of any form whatsoever must retain the following
acknowledgment:
"This product includes software developed by the OpenSSL Project for use in the OpenSSL
Toolkit (http://www.openssl.org/)"

THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
 ==
This product includes cryptographic software written by Eric Young
(eay@cryptsoft.com). This product includes software written by Tim
Hudson (tjh@cryptsoft.com).
/

Original SSLeay License
==================
Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)
All rights reserved.

This package is an SSL implementation written by Eric Young (eay@cryptsoft.com). The implementation was written so as to conform with Netscapes SSL.

This library is free for commercial and non-commercial use as long as the following conditions are aheared to. The following conditions apply to all code found in this distribution, be it the RC4, RSA, lhash, DES, etc., code; not just the SSL code. The SSL documentation included with this distribution is covered by the same copyright terms except that the holder is Tim Hudson (tjh@cryptsoft.com).

Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed. f this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used. This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:
1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. All advertising materials mentioning features or use of this software must display the following acknowledgement:
"This product includes cryptographic software written by Eric Young (eay@cryptsoft.com)" The word 'cryptographic' can be left out if the routines from the library being used are not cryptographic related :-).
4. If you include any Windows specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement: "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"
THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
The licence and distribution terms for any publically available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution licence [including the GNU Public Licence.]
 */

AAI – Authentication and Authorization Infrastructure

Exhibit 5
End User
Sample Clauses

Document management

Version/status:	0.91 / draft	1.12
Date:	13.2.2004	6 July 2004
Author(s):	Nicole Beranek Zanon SWITCH	Hans Rudolf Trüeb
	Hans-Rudolf Trüeb Prager Dreifuss	
File name:	040213_Anhang_5.doc	X1056350.doc
Replacing:		0.91
Approved by:		

A. Data Protection Sample Clause

"The End User notes that personal data about the End User is compiled from generally available sources and from communications received from the End User and other Universities as well as from off-site sources. The policy relating to the use and procession of such data is posted on the University website at […]. Such data will be used, inter alia, to authenticate and authorize the access to and use of various resources within the University and on other sites ("Approved Uses"). The End User hereby consents to the collection, processing, use and release of such data to the extent reasonably necessary for the Approved Uses. Such consent includes, but is not limited to, the release of personal data to other institutions by employing cookies and electronically exchanging, caching and storing personal authorization attributes."

B. Limitation of Liability

"To the extent permitted by the applicable law, the End User hereby waives all and any claims for cost and damages, whether direct or indirect, incidental, or consequential (including, inter alia, loss of use and lost profits), both in contract and in tort, arising from the use or in any way related to the inter-organizational authentication and authorization services which allow the End User to access certain resources of other organizations. This waiver of claims shall be valid and effective in relation to all participants of the inter-organizational authentication and authorization services including SWITCH and its affiliates, officers, employees and agents."