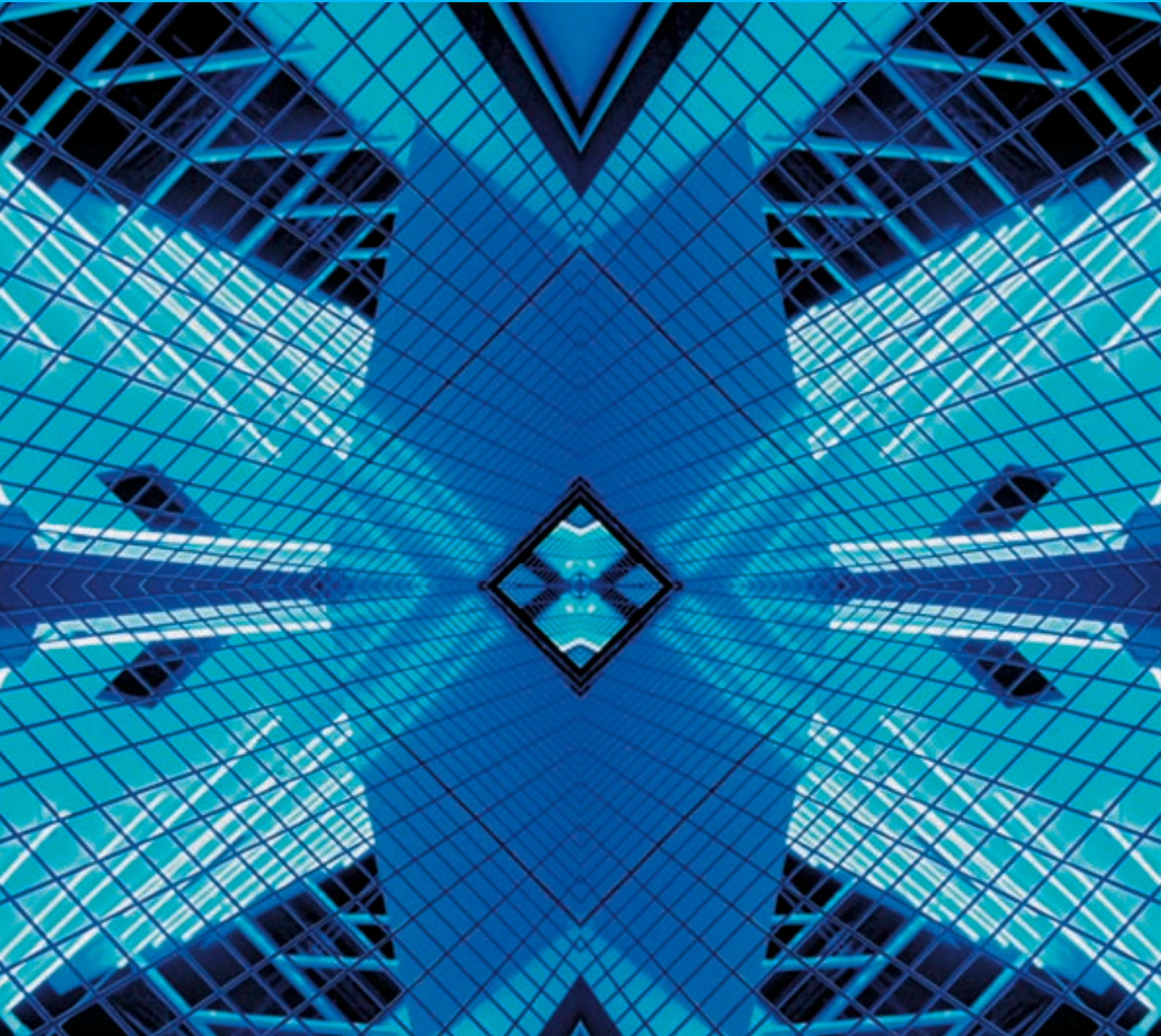


SWITCH

The Swiss Education & Research Network

A Joint AAI

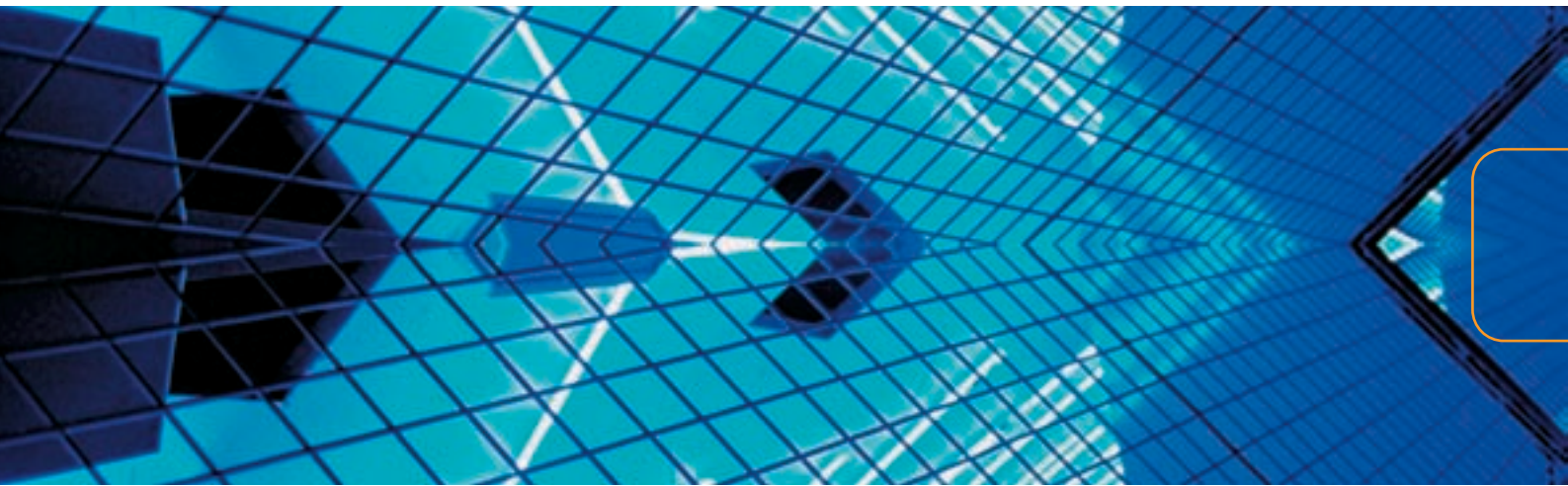
Step by step towards an Authentication and Authorisation Infrastructure AAI



Enabling E-Academia



Acquiring knowledge – at any time and from any location



Switzerland, as a centre of scientific knowledge, is moving away from the lecture theatre. Educational establishments are offering joint study courses, and students are attending courses in more than one university. Researchers can access their documents from outside and discuss their results online. All this is possible thanks to a joint AAI.

Building the future on the past achievements

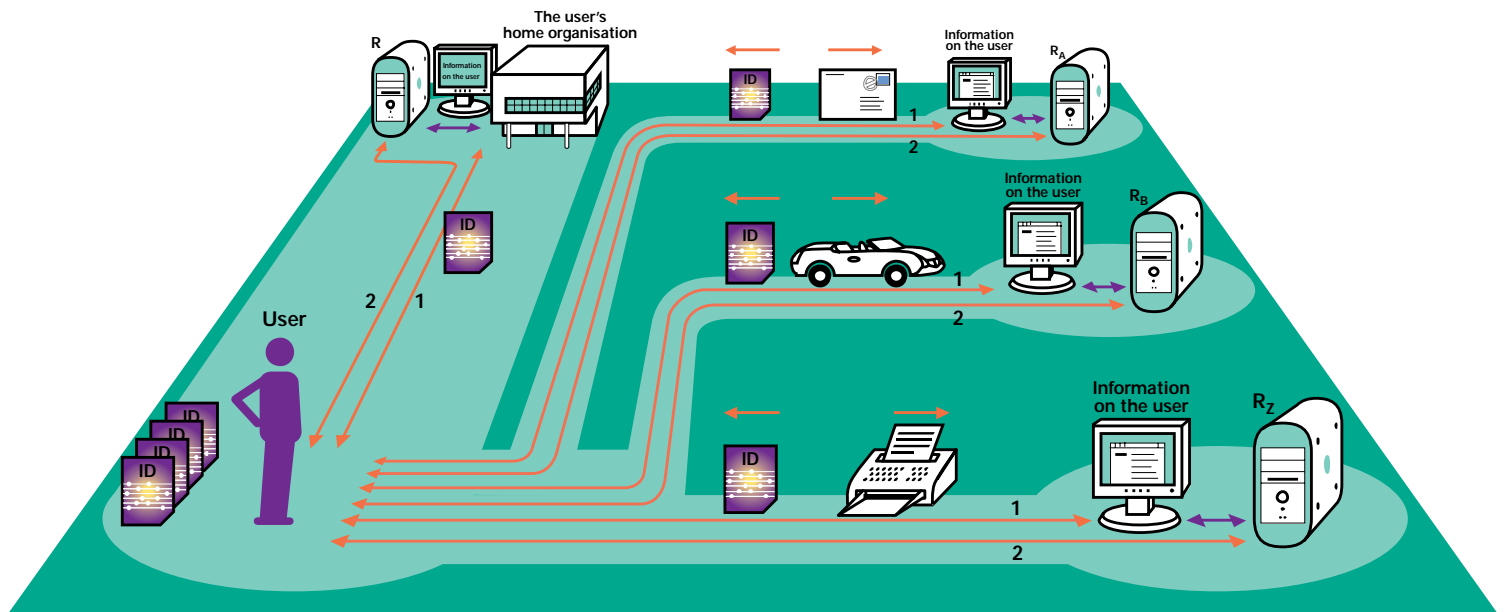
III Switzerland has a tradition of collaboration between its different universities. This has proved advantageous in terms of a uniform admissions policy, mutual recognition of academic qualifications, access to resources and the sharing of training costs between the cantons. A joint computer network has been set up which compares favourably with its international counterparts.

Everyone benefits from a joint AAI

One of the spin-offs of this has been the development of a firm foundation of mutual trust. Working on this basis, the next step must be to tackle the ongoing problem of incompatible and time-con-

suming access procedures in order to guarantee access to resources irrespective of location. The joint AAI Authentication and Authorisation Infrastructure will make this possible. Students and researchers will reap the benefits of mutually-compatible access options, and the administrative costs incurred by the resource providers will be significantly reduced. It will then be possible to work on the knowledge available in Switzerland at any time and from any location. III

From an obstacle course to an established network



The user has to register with each organisation and apply to each of them for an electronic identity.

- 1 Registration
- 2 Access to resources after authentication and authorisation
- R Networked resources
- ID Electronic identity

Registered in Berne, guest semester spent overseas, practical training in Lugano, resident in Aarau, international research for a thesis, and a research group located in Geneva. Intellectual mobility is what is required, and universal access to knowledge (regardless of location) is duly encouraged. Yet obstacles are constantly encountered – something that really shouldn't be the case.

A customised solution for everyone

III Ensuring that educational programmes, research data and knowledge are accessible online to authenticated and authorised persons constitutes no problem. With a resource provider at one end and a local enquirer at the other, the relationship is all set up. Registration and control processes are in place, and many organisations map out these processes electronically, thus increasing their efficiency. And, in many cases, dedicated customised solutions are being created and implemented on the basis of local requirements.

Organisation constitutes the key

If a user wishes to (and is entitled to) access documents from different resource

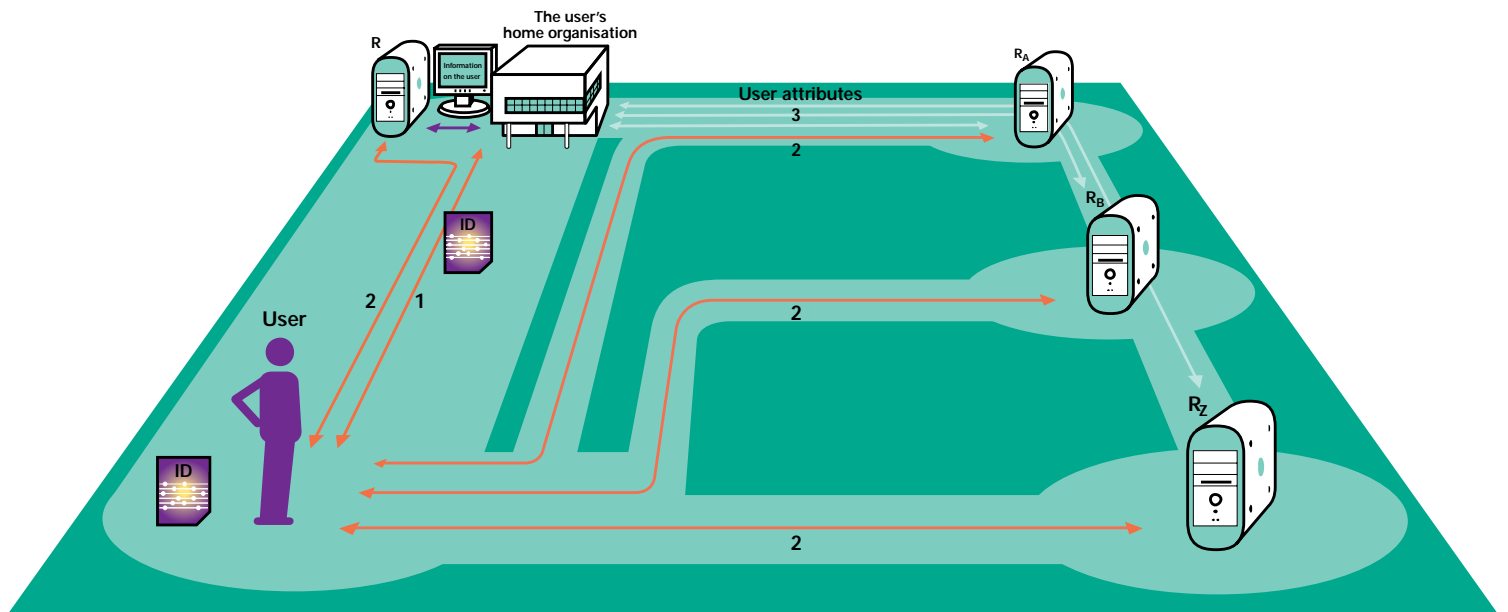
providers, the procedure becomes complicated. In this case, the user is called upon to manage his/her access rights, applying for and administering passwords, smart cards and other access keys.

Resource providers tie-up potential

At present, individual resource providers all register the individual users of their particular resources. The resource providers administer data, at considerable expense, in order to control the access of individuals to their particular resources.

A joint AAI will provide a shared interface for the user and reduce resource-specific administration costs.

Access from anywhere, at any time



The user only has to register with his home organisation and is allocated an electronic identity which is valid throughout Switzerland.

- 1 Registration
- 2 Access to resources after authentication and authorisation
- 3 The external organisation automatically arranges admission with the home organisation
- R Networked resources
- ID Electronic identity

A joint AAI Authentication and Authorisation Infrastructure controls the way in which all those involved in the Swiss academic community interact with each other. It is based on existing standards and structures, and embodies both experience and initiatives. It is configured to be as simple as possible, as comprehensive as necessary, and both accurate and reliable.

The AAI model

III A joint AAI controls authentication and authorisation relationships between the user, the home organisation and the resource providers. The following preparations are called for on the part of those involved:

- the home organisation must register its members.
- the resource providers must define the access rights – by user category, for example
- the user and his/her home organisation must determine which identification attributes are to be communicated for each resource.

Trusting people is fine, but proper verification is better

Everyone involved checks the stage that is of decisive importance to them.

Users

- authenticate themselves with their home organisation
- decide which resources they wish to access

Home organisations

- determine the method of authentication
- forward details of the user to the resource provider

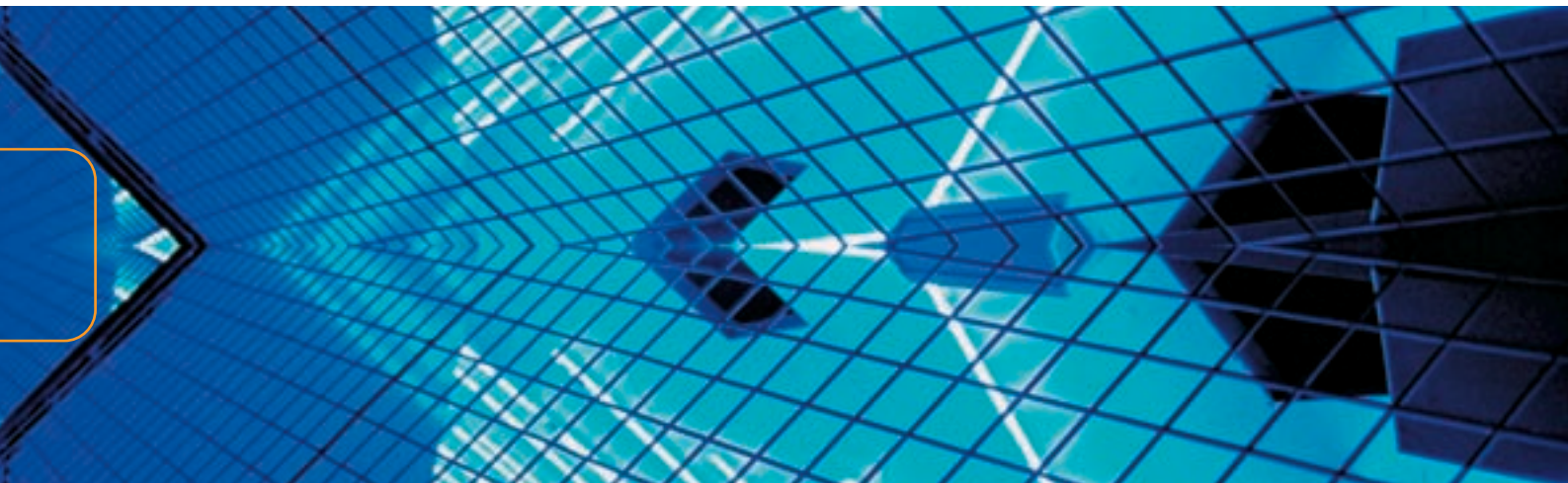
Resource providers

- grant or deny access to their resources

An AAI lightens the load on all concerned

A joint AAI frees up potential for each and every member of the Swiss Scientific Community. It expands on and integrates existing 'stand-alone' solutions. It allows new functions to be introduced and is ready to link up with university institutes abroad.

SWITCH as a strategic partner to universities



Exchanging data, networking skills and competence, providing national and international access. Operating and maintaining one of the world's leading science networks. Developing services for the benefit of the Swiss Scientific Community. This is the role of SWITCH.

At the service of the Swiss Scientific Community

III Wherever joint information technology services are of value for the Swiss system of higher education, SWITCH, with its comprehensive network know-how and available infrastructure, constitutes the logical and most cost-effective partner. This similarly holds true of an AAI Authentication and Authorisation Infrastructure, which constitutes the central element in the controlled use of electronic resources by registered users and is set to play a key role in the further development of the Swiss Scientific Community.

The aim is for an AAI to be available as a standard service in the Swiss Education &

Research Network in future, and, for this reason, we wish to pool all the available strengths, experience and requirements so as to be able to develop a solution that will benefit each and every member of the Swiss higher-education system. This is not intended to compete with existing stand-alone solutions and initiatives but to operate in conjunction with them.

The Swiss AAI Project is being followed with interest throughout Europe. If the Swiss universities now begin to construct an AAI, their knowledge and experience can make a significant contribution to shaping the international AAI environment. SWITCH will also be able to play an important role as the coordinator and central contact. III

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