What is TERENA?

Nowadays research and education depend increasingly on electronic media and computer networks. Networking services for research institutes and educational establishments are provided by dedicated research and education networks. These networking organisations collaborate at the European level, thus creating a high-quality international information and telecommunications infrastructure. TERENA is the association in which the research and education networking organisations from countries in and around Europe collaborate. TERENA’s objectives translate into four main categories of activities:

– providing an environment for fostering new initiatives of the European research networking community;
– supporting joint European work in developing, evaluating, testing, integrating and promoting new networking, middleware and application technologies through the TERENA Technical Programme;
– organising conferences, workshops and seminars for the exchange of information in the European research networking community, and promoting knowledge transfer to less advanced networking organisations;
– promoting members’ interests by representing the common interests and opinions of the membership in contacts with relevant organisations.

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Introduction

The first edition of the TERENA Compendium, published last year, was received with considerable interest, not only by NRENs but also by researchers and policy makers from all over Europe. TERENA received a considerable amount of feedback, much of it pointing out ambiguities and gaps in the data. We would like to express our gratitude here to all those who provided feedback and critical comments.

The experience gained in 2001 and the feedback received served as important inputs to the work of a Review Panel. The panel was composed of Lajos Bálint (Hungary), Urs Eppenberger (Switzerland), Sabine Jaume (France), Mike Norris (Ireland) and Helmut Sverenyák (Czech Republic). This panel met once and participated in frequent e-mail exchanges during the course of the preparation of the Compendium and the elaboration of the results. These people deserve a large part of the credit for the improvements in this edition of the Compendium.

A questionnaire was distributed in January of 2002. More NRENs than last year managed to send in their replies, and many managed to reply to more questions than last year. In addition, we were able to make use of the results of an earlier survey of research networks in the Mediterranean region, carried out by the EU’s EUMEDCONNECT project. As a result, this edition of the Compendium contains information from 47 NRENs from as many countries, even though from a number of them the information is still quite limited.

The Compendium consists of two parts: the basic information as submitted by the individual NRENs (available only on the web at http://www.terena.nl/compendium) and a number of maps, tables and graphs that try to bring together and summarize the information from the NRENs (available on the web and in printed form).

The data contained in the Compendium was first published in the form of a trial version, with a very limited print-run. NRENs were asked to check and update their data and to give feedback on the initial analysis. This final version is based on the checked data and on the feedback received from NRENs. From the feedback received, it is already clear that more work will need to be done for future editions of the Compendium. It will be necessary to continue to improve the questionnaire and to focus on what is really relevant.

This edition of the Compendium contains many new elements compared to the 2001 edition. Thus, there is now information about the market shares of NRENs (section 2.3), about the load on the networks (section 4.3) and on congestion (section 4.5). In a number of graphs, comparative information for 2001 and 2002 has been provided.

If one thing becomes clear from the information collected, it is that the national situations in the various countries are very different from each other. In some countries, for example, the NRENs provide extensive support to end-users; in others, they do not. In some countries, the NRENs also provide Internet coverage to secondary schools; in others, they do not. Such differences exist in almost all areas of work. This must be borne in mind constantly when evaluating the data presented in this publication.

The publication of this edition of the Compendium forms part of the COM-REN project, which has received funding from the EU’s IST Programme. Under the project, it will also be possible to publish an edition for 2003 and to do further work on developing meaningful indicators.

It is hoped that this edition of the Compendium will again prove to be of value for the NRENs, for policy makers and for students of Research Networking.

Feedback on the Compendium is welcome!

Bert van Pinxteren,
TERENA Chief Administrative Officer.
Some remarks on the methods used and the underlying data

Designing a questionnaire that is unambiguous for people all across Europe is not easy. The experiences from the 2001 edition were helpful in refining the questions for this edition. (The questionnaire that was used is available through http://www.terena.nl/compendium.) Yet, for example, the legal systems in the European countries are so different that trying to summarize the differences in a few words is almost impossible.

Collecting data of this type typically requires the involvement of a number of people from each NREN, as well as careful checking by NREN staff. For many NRENs, it proved to be difficult or impossible to answer all of the questions. For future years, it will be important to try to ask fewer questions, but in an unambiguous and easy to answer way.

UNESCO has taken the initiative to standardize what is meant by words such as “Tertiary education”. The UNESCO educational levels are known as the ISCED 1997 levels. These have been used for this Compendium.

Level 6 stands for the second stage of tertiary education (leading to an advanced research qualification). It typically requires the submission of a thesis or dissertation.

Level 5 stands for the first stage of tertiary education. Completion of an education at level 3 or 4 is normally required.

For the purposes of this Compendium, “Universities” are institutions providing education up to levels 5 and 6.

Level 4 stands for post-secondary non-tertiary education. This can include, for example, short vocational training programmes.

For the purposes of this Compendium, “Institutes of higher/further education” are institutions providing education up to level 4.

Levels 2 and 3 stand for secondary education (level 2 can also stand for the second level of basic education).

Level 1 stands for primary or basic education.

(The full ISCED 1997 document can be obtained through http://unesdoc.unesco.org.)

The information on the number of students in university education has been taken from the OECD for the OECD countries and is from 1999. For other countries, older information had to be used, available from UNESCO (mostly from 1997) and from SESTRCIC. The country entries on the compendium website give, for each country, for which year the information has been used. Information on population figures and National Income has been obtained from the World Bank and is from 2000.