The first GRV in Denmark in summer 1996 was a result of the OECD CSTP autumn meeting in 1995 at ministerial level. Here the participants had begun to discuss the implications for government policies caused by the emerging use of IT in research and education.

There was strong evidence that the widespread and multi-faced use of IT by the scientific community (which began to develop about two decades ago) was already having significant effects on many aspects of the functioning of the science system.

The science system in all countries were at that time, and still are confronted with the challenge of the need for adaptation to a number of changing factors, while assuming increased importance to the knowledge-based economies of all OECD countries, both as a source of new knowledge through research and as a major actor in the education and training of scientists and engineers.

As you all may know, the conference was a first, but not a last step in a process developing an appropriate policy framework in this area where governments have an important, although not exclusive role to play.

Out of the conference discussions emerged two broad themes that both require international co-ordination and initiatives:

* Ensuring the availability of an adequate IT infrastructure and facilities to the science system nationally as well as internationally levels, including supporting electronic infrastructures in developing countries.

* Promoting an environment for an open and productive science system that will strengthen the contribution of science and technology to economic growth and social development in all countries.
In order to maintain a satisfactory electronic infrastructure for the science community in the future financial resources are required. This may necessitate a kind of new deal between governments and the science community.

As a result of the increasing commercialisation of the Internet and the rapid development of its use by non-scientific users, the exponentially increasing volume of information may hamper the utilisation of advanced network services on high-speed electronic networks by scientists in their research projects. Therefore it is an important task for governments collectively to ensure that researchers have access to a high-speed, seamless, ”web” of research networks, connecting both public and private research institutions thereby easing the co-operation between research institutions worldwide.

In their role as providers for the bulk of financial resources needed by the science system, governments should therefore ensure that adequate resources are allocated.

The conference emphasised the importance of upgrading existing research networks and ensuring international compatibility.

It was agreed that the governments of the OECD member countries should develop co-operation towards legal, regulatory and commercial regimes that will make access to different network structures compatible.

The conference also agreed that there is an urgent need for further analysis of the current status and requirement of electronic structures and networks world-wide, as well as their impact on the science system and society.

As indicated by the title of the Conference, ”The Global research Village” the ever increasing globalisation of knowledge goes beyond the exchange of knowledge across national borders. But the title also implies that the production of knowledge will be organised at a world scale. Globalisation is far more than sharing experts and resources.

To enhance the possibility of real scientific globalisation, and to facilitate the participation of developing countries in the global research village, the conference recommended that
* Efforts aimed at supporting the science systems of non-OECD countries should include programmes for the development of basic electronic infrastructure and communication services.

* The OECD in close co-operation with other international organisations concerned, should undertake an analysis of the status and the need for IT in the science system, and especially in the universities of developing countries.

Scientific progress has traditionally been based on an open exchange of research results among scientists world-wide, and on the peer review system which functions as a quality assurance system ensuring validation of new knowledge and the professional recognition of scientists.

Scientific journals play a central role in both respects. As a result of the notable growth of scientific information and of the increased emphasis on the economic value of science, these two features of the science system have been faced with a number of issues which need to be further explored by governments, the scientific community and industry at both national and international level. These issues include:

* how to balance science and the requirements of the research community for open access to the most up to date scientific information, on the one hand with the intellectual property rights (IPR) that may be held by various stakeholders in research results on the other.

* achieving an internationally agreed and effective legal and policy framework for the exchange of scientific information between public and private domains, as part of the broader IPR regime.

The conference discussed the problems and opportunities arising from the development of electronic publishing. It is essential to maintain high standards of quality control so that publication in electronic journals can be equally recognised throughout the science community.

Furthermore the conference discussed how the information and communication technologies are bringing into question the concept of traditional libraries. The users of the 21’st century
library must have basic knowledge about information systems and computers to get all the information they need from the library through their computers at the office or at home.

Electronic libraries hold the promise of bridging the information gap between the industrialised countries and the developing countries. They offer immense opportunities of global access to digital libraries and databases to researchers both in the public and the private sector.

The establishment of virtual electronic research libraries and the digitisation of research papers will ease access to knowledge worldwide and support virtual co-operation among scientists.

The conference recommended that the governments of the OECD member countries support the development of open access virtual electronic research libraries and the digitisation of research documents.

To sum it up, the conference must be viewed as the first step of a process based on continuing dialogue between the different components of the science system (policy makers, research institutions and the scientific community), as well as among policy makers from different countries. A number of orientations for government policies, which require further elaboration and discussions at both national and international level have been agreed upon, and a number of areas on which more facts, data and experience need to be collected and assessed have been identified.

As a result of the conference findings it was recommended that the OECD countries should hold a follow-up conference in 1998 to take stock of the progress made and further refine the policy framework to ensure that the science system, through its contribution to the economic and social development of all countries, can best exploit the full potential of IT in all its dimensions.

The first GRV conference was followed by the second conference in Portugal and the third in the Netherlands. We are now attending the fourth and last conference here in Warsaw. All of these conferences have contributed to the focus on various essential issues of great importance for society in the 21ST century and the interaction between government and the science and education community.
Good work has been done and now it is up to the OECD, other organisations and governments to build on the foundation laid by these conferences and to make sure that the Global Research Village will be implemented and working world-wide.