Dakar, 30 January 2006
revised 14 February 2006

*International Workshop on Promoting Access and Capacity Building for Scientific
Information Resources and ICT Infrastructure in Developing Countries*
**Hosted by the
Académie des Sciences et Techniques du Senegal
The U.S. National Academy of Sciences
The Chinese Academy of Sciences
on behalf of
The InterAcademy Panel on International Issues (IAP)**

**Le Meridien President Hotel
Dakar, Senegal**

30-31 January 2005

Open Access, the WSIS and Web 2.0

Dr. Francis MUGUET
ENSTA (France)
chair WSIS Civil Society working group
on Scientific Information
http://wsis-si.org

Excellencies, Ladies and Gentlemen,
     The organizers are heartily thanked for their kind invitation on African soil.
Open Access is a matter of urgent concern for development all over the world, and
specifically in Africa. At the WSIS in GENEVA (10-12 December 2003) were
adopted the following recommendations :
Declaration of Principle :
B3 Access to information and knowledge

*28. We strive to promote universal access with equal opportunities for all to scientific
knowledge and the creation and dissemination of scientific and technical information,
including open access initiatives for scientific publishing.*

Plan of Action :
C3. Access to information and knowledge

10 Encourage initiatives to facilitate access, including free and affordable access to

open access journals and books, and open archives for scientific information.

C7. ICT applications: benefits in all aspects of life
22. E-science

b) Promote electronic publishing, differential pricing and open access initiatives to make scientific information affordable and accessible in all countries on an equitable basis.

c) Promote the use of peer-to-peer technology to share scientific knowledge and pre-prints and reprints written by scientific authors who have waived their right to payment.

It must be underlined that Open Access corresponds to a different concept that Equitable Access which is linked to the notion of equitable trade or commerce which implicitly means that the content is not freely available. Of course, the notion of equity is highly context dependent. A number of states organized WSIS events before and after the Geneva Summit. A most interesting event was organized by the Russian Federation : [UNESCO between two phases of the World Summit on the Information Society](#) 17-19 May 2005, in St. Petersburg. The final document includes the most precise recommendations that were ever drafted concerning Open Access in an intergovernmental event:

2. Information / Knowledge Society Research

We recommend UNESCO, with the possible help of other UN specialised agencies, to create a number of inclusive, transparent, multi-stakeholder and multi-disciplinary international research / working groups with the following missions:

to explore and propose new Open Access strategies as the ICTs are evolving (by a permanent multi-stakeholder research bureau).

5. Science and Innovations in Knowledge Societies. We recommend UNESCO and other UN specialised agencies, as well as other public and private funding institutions in the world:

- *to concentrate their financial resources on supporting or implementing self-sustainable Educational, Scientific and Cultural Information systems without costly recurrent licensing fees, with the help of Open Access repositories as well as Free Software, Open Source, and proprietary Freeware tools;*
- *to support creation of second disclosure Open Access information resources whereby authors are describing the results of their research that have already been published elsewhere;*
- *to provide financial support to first and second disclosure Open Access resources to eliminate the need to charge publication fees;*
- *to support the creation of an association of Open Access Publishers to reinforce their effectiveness in collaboratively raising financial resources and*

in gaining collective renown;

- *to create or support seed funding programs to create new Open Access information resources everywhere in the world and to promote the conversion of existing resources to the Open Access model;*
- *to require as a grant or endorsement condition, publication in the Open Access model of any full report of research being even partially funded, or morally endorsed by them;*
- *to support and endorse the initiatives of Funding Institutions to implement their own mandatory Open Access Archives;*
- *to create or support the implementation of a free Digital Object Identifier system to retrieve and directly and freely identify digital documents; and*
- *to build Open Access repositories in a way that would allow easy site mirroring as well as complete copying on portable media, such as CDs or DVDs, to allow access to knowledge in regions with little or non-existent Internet connections;*
- *to provide funding and in-kind assistance to a Free Software project that implements the peer-to-peer functionality as recommended by the WSIS Plan of Action to allow efficient exchange of scientific information.*

The WSIS Geneva recommendations, as well as the WSIS Saint-Petersburg meeting recommendations were the results of the intense lobbying actions of the Civil Society Working Group on Scientific Information (http://www.wsis-si.org) created and coordinated by Dr. Francis Muguet.

The WSIS Geneva recommendations, as well as the WSIS Saint-Petersburg meeting recommendations an intergovernmental meeting, unfortunately were not quoted explicitly in the UNESCO draft budget that was prepared to be presented at the 33rd conference, in September 2005. However Italy submitted an Amendment to the Draft Programme and Budget including suggestions concerning Open Access in paragraph 0511 (33G p 195) V1.1 "Creating an enabling environment for the promotion of freedom of expression and universal access" strategic approaches. (18 August 2005) :

Requests the Member States (a) (b) (c) to foster through the International Federation of Library Associations and Institutions (IFLA) dissemination of the principles of open access; to foster dissemination of the principles of open access, particularly in universities; to promote developing countries' open access to archives for the sake of spreading scientific know-how;

Invites the Director-General (a) to assess the feasibility of creating a database on existing open access initiatives worldwide and to report at the forthcoming sessions of the Executive Board and the General Conference on the progress of open access strategies throughout the world; to promote a network of national working groups with a view to fostering open access in their universities, to cooperate internationally

in initiatives and projects on the subject of open access, and to promote the training of experts for cooperation in the publication of and open access to texts free of charge.

It appears tentatively that IFLA must be thanked for this advocacy. This amendment was taken into account in the following way in the [Records of the General Conference - Resolutions](#) 📄 page 227 / p 225 pdf : *20. Having examined 33 C/DR.68 (submitted by Italy) which proposes in paragraph 0511 to include a reference to UNESCO's contribution to the implementation of the concept of "universal access" and "open access", particularly to scientific works in universities, the Commission recommended that the General Conference invite the Director-General to take the concerns of its author into account in formulating the work plans.* Unfortunately, we have not been informed that UNESCO Director-General has, as invited by Italy in August, yet made a *report at the forthcoming sessions of the Executive Board and the General Conference on the progress of open access strategies throughout the world.* May be the schedule was too tight for the 33 C in October. It is hoped this report could be prepared soon. It remains to be seen how Italy's concerns are going to be taken into account in current work plans. Italy and other national delegations should be vigilant that UNESCO is compliant with this amendment . It is firmly hoped that UNESCO that volunteered to be one of the moderator/facilitators of the WSIS actions lines C3 Access to Knowledge and ICT application e-Sciences would indeed logically proceed with an itemized implementation of the WSIS recommendations.

Open Access was not a topic at the forefront of the diplomatic negotiations during the second phase, since the negotiations were focused on the following two points : financial mechanisms and Internet governance, about which no agreement could be found during the Geneva phase. Therefore it not surprising if Open Access is only mentioned in the Tunis Agenda.

90. We reaffirm our commitment to providing equitable access to information and knowledge for all, recognizing the role of ICTs for economic growth and development. We are committed to working towards achieving the indicative targets, set out in the Geneva Plan of Action, that serve as global references for improving connectivity and universal, ubiquitous, equitable, non-discriminatory and affordable access to, and use of ICTs, considering different national circumstance

service role of providing free and equitable access to information and of improving ICT literacy and community connectivity, particularly in underserved communities;

It must be underlined that Open Access advocacy cannot be reduced to another business model concerning journals, it is about searching for all available avenues to achieve Open Access to research accounts & data. In this context, a better interaction between ITCs scientists and Open Access advocacy must be achieved.

There are current technological advances concerning the network infracture such as concerning higher bandwidth networks, regional interchange etc...
However, the WSIS negotiations did not focus enough on the Web, as distinguished from the Internet as they do correspond to different OSI layers. It is regrettable that the W3C did not play a major role in the WSIS process. Therefore not enough awareness has been raised concerning the current evolution of the Web which has been termed the Web 2.0. One of the characteristics include enriched multimedia, broader use of cryptography, the Semantic Web (XML, RDF, OWL etc...) and Peer to Peer network (such as BitTorrent).
Several possible schemes have been proposed within the WSIS-SI group. These schemes were proposed for exploration and require further study :

1/ Preprints.net: The idea is to use encrypted preprints to bypass the policy of some publishers (a serious issue in Chemistry) that consider that preprints constitute first disclosures that make the account unelegible to be submitted and published in their journals.

2/ Second disclosure Open Access journals where people can submit yet another account of a research that have been already published elsewhere. These second disclosure accounts may or may not constitute a self-plagiarism with different words and pictures. In our exploratory discussions, most authors expressed the wish to write those accounts in a format that would better adapted to current technology. The currently prevailing paper presentation style that have not changed since the mid-XIXth century is obviously obsolete. It does contribute certainly to the low attraction for sciences in western countries. However use of attractive multimedia requires high bandwidth. The need for high bandwidth can be however alleviated thanks to the use of the peer-to-peer technology whereby all members of the same downloading swarm are playing the role of micro servers to one another. This approach is very effective within high bandwidth networks. P2P TV clients and servers (eg. http://p2ptv.cc) can be customized towards this goal.

3/ Reprints.net : Since table of contents of journals are publicly available on the Internet, the idea is to have special kind of journals or epijournals which contains only table contents which are linking to the Open Access resource which is related to the research account : preprint or reprint archive, second disclosure account or P2P

link (eg BitTorrent file).

4/ Commercial publishers have set up a private DOI (Digital Object Identifier) system with a special Handle system which is different from the DNS and is protected by a software patent. Yet another recent object retrieval system is the Object Naming Services (ONS / RFID). There is a need to develop a public DOI system. A more sophisticated proposal is to set up Semantic Web gTLDs (http://semantic.cc). In the

 SWgTLDs , each domain owner must abide by specific XML schemas or ontologies, and a DOI system is proposed along the DNS system whose identifiers are based on torrent files. Therefore an added advantage is that the whole extensions are P2P friendly allowing sites with small bandwidth to still be able to broadcast information efficiently. For Open Access, it is proposed to create the SWgtld *.open* extension, and within this scheme, Open Access content would benefit from a technological superiority over contents locked by commercial or cryptocommercial interests.

Concerning P2P, there has been a very good surprise in France during the deuxième séance du mercredi 21 décembre 2005 ,when an amendment was voted by the French Deputies Chamber which is paving the way toward the legalization of P2P with a voluntary Global License scheme which is akin to Radio license. In combination with the WSIS recommendation [Geneva Plan of Action e-sciences c)] concerning P2P, it is suggested to governments to study and adopt a Global License scheme for scientific material exchanged over P2P networks.

Concerning the Follow-Up of the WSIS, it is proposed that Open Access be recognized as an integral component of the various forms of Digital Solidarities. However there is unbalance in terms of events, in comparison with the Internet Governance issue concerning which a first meeting is scheduled around June in Athens. There it is proposed to organize a **World Digital Solidarities Forum (WDSF)** or **Forum Mondial des Solidarités Numériques FMSN**, a back to back event occurring just after the first event of the Internet Governance Forum (IGF) in Greece.

A list of the topics to be covered could be the following :

 1/ Financial Mechanism (Digital Solidarity Fund and other alternative mechanisms)

 2/ Open Access to Scientific Information

 3/ Open Educational Resources

 4/ Free Software

 5/ Volunteers

 6/ Disabilities

 7/Multi-Stakeholders partnerships

as well as transversal themes such as :

 a/Linguistic diversity and b/Cultural diversity

Thank you for your kind attention.