Input to the Political Chapeau and Operational Part
From the Education, Academia and Research taskforce of WSIS Civil Society

I. On Political chapeau / Tunis Commitment
The education taskforce has the sense that, in spite of civil society's emphasis on the importance of cultural diversity and plural knowledge societies, the document doesn't reflect this evolution. Hence we suggest that the vocabulary should be modified to reflect the plural situations of cultures worldwide and to include a certain amount of concepts that are currently absent, especially when related to education, like global public goods, open courseware, community informatics, …

The education taskforce feels that the document tends to ignore civil society and reasserts the major role of states and governments. Hence we suggest a much more integrative approach to multistakeholder partnerships, in order to include major actors of civil society, especially when related to education, like teachers, librarians, researchers, computer scientists, software developers,…

The education taskforce regrets that the document is permeated with a general understanding of knowledge as being technology-driven and hardware-oriented, with a major focus on infrastructure. This creates a major bias in the understanding of the needs, uses and practices of ICTs, in the present and in the future. Hence we suggest that the definition of knowledge should be extended to distributed intelligence, to integrated networks, and also to opportunities for sharing and distributing information, which can be face to face or long-distance, formal and informal,…

The education taskforce thinks that throughout the document, ICTs tend to overshadow traditional media, and that information is not balanced enough with communication and transmission. Sharing of knowledge is not enough, if it is not complemented with an awareness of the opportunities and challenges, the advantages and the limitations of information, especially on how it responds to needs in education, as a means of creating an enlightened public opinion. Hence we suggest the systematic use of media in relation to ICTs, which are turning partly into media institutions themselves. Besides media can have promotional value for knowledge societies as they inform about them and they can raise awareness of their risks and benefits, therefore providing for a better understanding and evaluation of policies and uses.

Given these general comments, the education taskforce would like to assert strongly that the objective of knowledge societies cannot be reduced to providing equipment to education centers, with an internet access at best or to an instrumental use of these computer resources and applications. An effective incorporation of media and ICTs in education must ensure the acquisition of rules, procedures and contents that empower people for the independent and creative participation in knowledge-building, in response to needs that are not pre-established by other interests, be they political or economical.

Addressing point 6, on Development orientation and the recognition of "knowledge as vital to human existence…"

The education taskforce finds the general vocabulary used in the documents and especially in this section lacking in specificity. Hence we suggest to focus on some specific issues, related to teacher training, media and ICTs education, open courseware, free software, community informatics and research. These should be considered as **new items** to be incorporated in the final document.

> ➤ **Teacher training, the central challenge for knowledge societies**

By stepping forward from the stage of "information" to that of "knowledge" society, human communities choose to put the teacher back at the core of their system. Being a central figure in a "knowledge society", the teacher has to fuel it with its vital substance, by assimilating, expanding and disseminating knowledge through various educational channels. In that capacity, no machine can be substituted to him. Whereas huge amounts of "information" can be efficiently stored and delivered by means of ICT systems, no such system, however sophisticated, can fully take the role of teacher and knowledge mediator. The central function of the human teacher is even more obvious in less developed countries where technologies are rare.

Yet if they cannot replace the teacher, ICTs can nevertheless provide powerful tools to support education, either in specialized learning environments, or in open and distance education facilities. In countries where teachers are scarce and often lack proper training, such environments and systems, when available, must be used in priority for teachers' training, to enable them to upgrade their competence and qualification. Internet and the video-conference devices expand the possibilities of long distance education and training, up to now generally based on postal exchanges of texts and cassettes, supported by telephonic communications. For the moment, the lack of adequate infrastructures in many parts of the world limits the general use of the new technological possibilities. But experience is accumulating and pointing to specific challenges, not unlike those of in-class teaching (attention deficit of students, administration of exams and marking,…). For its part, Internet, apart from its capacity to replace books and notebooks, should offer the possibility of long distance exams and exercises administered via computers.

In such a process, the situation of "digital divide" must be taken into account, for digital development can be very different from one country to another. But even in those parts of the world where ICTs are less developed, an adequate resort to available resources, such as radio or TV channels, satellite network, and adequate programs and software, can prove remarkably efficient and economical. They can help to train, qualify, and empower whole generations of teachers, tutors and trainers; they can comfort those who sometimes have to work in precarious situations. Teachers and trainers are often not aware of the range of delivery modes available, and even if they have a basic awareness they generally have little grasp of the costs and benefits associated with different delivery modes. Raising awareness of these issues could improve planning and implementation of capacity building interventions.

Yet although such new methods prove efficient for training the future, or already active teachers, the recourse to media and ICTs is not always easily accepted by academic authorities in charge of delivering the final degrees. They are often reluctant to accept the flexible and modular approach of those new modes of teaching and training, and sometimes consider them as an undue replacement of the professor's voice and authority. Thus a general recommendation in favour of

the use of ICTs is not enough. The training sessions should always be concluded with an official validation process and regular degrees providing the teacher with a proof of better competence, and the guarantee of a better career.

> ➢ **Media and ICTs education, as both critical and creative capacity-building**

The rise of Internet and of cellphones has completed the global media context in which the young generations have lived already for some years. For media education, it imposes a radical change of perspective. Out of its position of specialized sector and of its perspective of defense against or marginal use of the media, it must now position itself at the center of the whole education process. It is forced to consider the media like an "environment" with its attendant resources, dangers, possibilities of actions and creation.

Information is available from many sources and in many formats, such as printed text, television, videos, web sites, and more. To be *information literate* young people need to know why, when, and how to use all of these tools and think critically about the perspective they provide. ICTs literacy is complementary to media education as it is concerned with teaching and learning about the whole range of contents, sources and supports and how to use them, and the taskforce proposes to subsume it all under the umbrella term of "media and ICTs education", beyond simple literacy.

Media and ICTs education aims at developing *both* critical understanding *and* active participation. It enables people to interpret and make informed judgments as users of information supports and sources; but it also enables them to become producers of media in their own right, and thereby to become more powerful participants in society. Media and ICTs education is about developing people's critical *and* creative abilities.

To become media and ICTs literate is part of the basic entitlement of every citizen, in every country in the world, to freedom of expression and the right to information and is instrumental in building and sustaining democracy. While recognizing the disparities in the nature and development of media in different countries, this specific education should be introduced wherever possible within national curricula as well as in tertiary, non-formal and lifelong education. Media and ICTs education classes can take place in a range of institutional settings, both 'formal' and 'informal' and they can be provided by both public and private training centres.

The general objectives addressed by such education should be : to foster the development of a media literate citizenry with the cultural and critical thinking skills and abilities needed to identify, acquire, manage and use information to enrich all aspects of their work and personal lives ; to identify and encourage effective practices in media and ICTs literacy around the educational world ; to promote media and ICTs literacy through regional approaches and to facilitate exchanges between teachers and of materials ; to propose innovative curricula about media and ICTs literacy to teachers schools ; to improve co-operation between government officials, researchers, educators, librarians and media practitioners through professional associations

> ➢ **Open courseware as unrestricted access to knowledge in higher education**

The open courseware concept belongs to the larger open access to knowledge movement in the Sciences and the Humanities that promotes free and unrestricted access to knowledge (Berlin Declaration 2003). An open courseware site provides open access to the primary teaching materials for courses taught at educational non-profit institutions.

There is a variety of solutions to define the openness of the system, as all rights are not necessarily given away. Some institutions publish materials under a variety of rules that allow or not edition, translation, incorporation of other documents and other sources, with or without requirements to mention the original author, often as long as it remains within the realm of non-commercial education

Open courseware offers the advantage of ready access to the materials of a course but also all the surrounding data (syllabus, calendar, assignments, projects, tutorials, or even video demonstrations…). It is also free from Intellectual Property Impediments, as the teaching institution usually can make the materials available for open use, without infringing others' copy rights. It also has presents the advantage of promoting long distance training, as it is often without barriers of entry (no password) and without barriers of geography.

The taskforce thinks that though there is not yet a business model for Open Access in general, such an approach can generate huge savings in the long run for the governments and states and allow developing countries to explore some solutions to bridge the "digital divide" at a minimal cost.

> **Free software as a non proprietary resource**

Free Software can be a valuable resource in education and is also part of the Open Access model. Not only can it be technically or pedagogically superior to proprietary alternatives, but it can also promote the freedom and cooperation values in the schools. Its basic spirit involving freedom and cooperation promotes the spirit of education in a democratic environment.

If we want the future generations to understand the real basis of the Technical Culture of the Digital Age, using free software is one of the best ways we can recommend. If not, they will become only users and consumers of information technologies, instead of active participants and well informed citizens in the information society. Free Software is the most emancipatory choice for all education-based activities as it encourages schooling of the mind over product schooling, while upholding the scientific principle.

Free software is a matter of the users' freedom to run, copy, distribute, study, change and improve the software. More precisely, it refers to four kinds of freedom, for the users of the software:
- The freedom to run the program, for any purpose (freedom 0) ;
- The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this ;
- The freedom to redistribute copies so you can help your neighbour (freedom 2) ;
- The freedom to improve the program, and release your improvements to the public, so that the whole community benefits (freedom 3). Access to the source code is a precondition for this.

Therefore there is a sizeable need to promote a plurality of approaches in education means and tools, among which open courseware and free software are a viable alternative, which should be mentioned at least every time proprietary materials and software are mentioned, in any WSIS document.

➢ Research, beyond the R&D model

The document totally obliterates research, as a target for itself and as a means of reaching other targets. Current research in ICTs is excessively concentrated in the areas of technological innovation and market development, both areas feeding each other in a circular relationship, with a prevailing priority on short-term return on investment and industrial applications. Meanwhile there is an endemic deficit of research aiming at solutions to identified problems within a broader societal perspective or with a comparative development perspective.

As a result, there is an urgent need for a sizeable effort to undertake or revitalize research in neglected areas, focusing on the users and studying the social and cultural implications of the Information Society. Social research should be promoted not in addition, but in close connection with industrial research from the earliest stages of development. Avoiding reductionisms, future research should furthermore encompass all vectors of information flows including traditional media and the entertainment industry, with special attention to the role of public service and community radio and television in the world, always keeping the end-user in mind.

Sound policy and more generally harmonious development of societies worldwide require extensive, transdisciplinary, transnational and long term research efforts, subsidized on the basis of transparent procedures for topic-definition, project selection, and evaluation. It also necessitates involving the scientific community to work in close connection with civil society, the industry and political institutions, thus amplifying the participatory processes initiated within the World Summit for the Information Society (WSIS), for the benefit of all.

The education taskforce strongly feels that researchers, together with computer professionals and teachers should develop a full awareness of their role in knowledge societies. They should be allowed to contribute to it with a status that confirms their full and free contribution. Clear principles should be developed for the use and distribution of the body of knowledge they produce, as it is a global common good that should be accessed via a variety of means and media, to avoid the risk of high dependency on digital technology alone.

Researchers can be key partners in reaching the targets of the plan of action, as they can provide indicators, quantitative and qualitative, and they can also provide interpretation as to the impact of the ICTs, their uses and their role in society. They should be more clearly integrated in the WSIS process and beyond, toward the Millenium goals, as a series of follow-up mechanisms, observatories and evaluation tools need to be developed. Researchers should be called upon for their expertise in such domains, to ensure the validity of the process and the reliability of the decisions that governments will make from it to implement their policies.

➢ Community Informatics, Practice in the Computing Professions

Addressing point on Further commitments « We hereby undertake further commitments to … »

Computer professionals for social responsibility are also aware and supportive of education needs. They would like to see increased and ongoing awareness and use of technically sound and ethical engineering and design methods for the development of socially-appropriate ICTs.

They support ongoing research in the discipline of community informatics, which seeks to develop technically sound and ethical engineering and design methods specifically for the involvement of communities in the creation and management of ICTs. Thanks to their dedication and skills, the education taskforce can commit itself to mobilizing resources, including human resources, to promote and enhance education at a local level, to answer the needs of specific communities (women, indigenous people, physically impaired people, young people, etc.).

The education taskforce is especially preoccupied in maintaining and promoting their role in developing countries where community informatics can help bridge the digital divide and create digital dynamics. There are 5 strategic principles to keep in mind:

- give prevalence to collective use above private and individual use, by launching real-life experiments, with collective applications, that can be multiplied and transferred as often as possible;
- ensure whenever possible that the most advanced technologies (multimedia, internet, broadband,…) that are not always available, can be aptly relayed by other media and technologies (radio for instance);
- to make sure of good returns of investment, give as open an access as possible to places that are well equipped (especially with Internet technology), and can complement each other : schools, telecentres, libraries;
- give priority to the training of teachers and trainers, providing them with an education in methodology and discipline as much as in technology, inducing them to share and exchange experiences rather than depend on a master-student stale relation;
- encourage and induce the implementation of innovative pedagogical tools and materials, which should always be richer than the technology employed, however costly it may be.

II. Operational part of the final document / Tunis Agenda for Action / Tunis Plan of implementation

The education taskforce would like to propose some concrete activities and some recommendations for implementation of a certain number of instruments, in relation to **new items** that should be incorporated in the final document (as described above).

➢ **Teacher training**

The education taskforce recommends quantitative and qualitative assessments of the impact of communication and information in education settings. It seeks to stimulate the debate on how to assess the impact of communication and information in development initiatives. It wants to help raise awareness of the need to focus efforts in demonstrating the value of communication and information, searching for methods and techniques that can provide valid measurements, both at the quantitative and qualitative level. It emphasizes the fact that mere stocktaking will not be of any help if not accompanied by analytical evaluation and sustained by criteria of interoperability and transferability.

A major focus should be placed in the development of training materials. Certain standards and procedures are already well-established, primarily through the ITRAINOnline initiative www.itrainonline.org), the UNESCO funded MultiMedia Training kit project (http://www.itrainonline.org/itrainonline/mmtk/index.shtml) and the FAO funded IMARC initiative. The open source community has also evolved around the development of methodologies and standards that also allow for peer practitioner networking support and development of Free Software. The education taskforce believes that the know-how and the competencies already exist. What is currently required is a change of scale, worldwide, and the political will for the states to promote that larger extension of teacher training.

➢ **Media and ICTs education**

The education taskforce recommends the drafting of an international document providing a rationale for Media and ICTs education and modular curriculum development, and its implementation and monitoring at national level, along the lines developed by the MENTOR project (with the European Commission, UNESCO and the MENTOR association). The Mentor documentation includes a clear model of learning progression, details of specific learning outcomes, expressed in terms of competencies; applied research; practical guides for teachers, parents and pupils; criteria and procedures for learning evaluation and assessment; and promotional materials.

Media, information and ICTs literacy are all inter-related. If any one of these is absent or weakened, it puts the entire construction at risk. For instance, policy documentation or curriculum frameworks in the absence of professional development can be merely a matter of empty rhetoric. Professional development and self-organization by teachers is fairly meaningless if there are no clear curriculum frameworks for them to work within. Policy, teaching and research should be interconnected: development in each area should support development in the others.

Among the actions to be taken, the education taskforce proposes :
- The Launching of an international awareness-raising campaign and a professional alliance for media and ICTs literacy. This could include raising awareness about the WSIS process itself, and the general information deficit on the policies that are coming out of it;
- The convening of a high-level of experts in the field, leading to the agreement of a declaration re-stating and re-defining the case for media and ICTs literacy in the "information Age", for circulation to national education ministries and other relevant bodies. Support would need to be provided for participants from developing countries;
- Drafting of publications based in the already existing extensive documentation and research results aimed at teachers and policy makers. This is intended to provide introductory practical guides and style books to media and ICTs education, covering the following key questions: why (rationales for media literacy); what (definitions); where (curricular and institutional locations); and how (issues of pedagogy and practice);
- Preparing a modular curriculum and style books for media and ICTsliteracy, targeting teachers and journalists training programs in full respect of cultural and linguistic regions;
- Regional (rotating) chairs on media and ICTs education, aimed at national experts in the field, to encourage them to spread their expertise via "training to training" courses;

- The development of an accessible international collection of teaching and learning resources in media and ICTs education and support for those involved in translating or adapting existing resources to specific national contexts, as done through the MENTOR Internet portal.

➢ **Open courseware**

The education taskforce proposes a recommendation to the member states for the creation of an open courseware consortium under the aegis of an international organisation, an IGO like UNESCO (where the initiative was first launched) that works efficiently in collaboration with NGOs in the field. It would allow non-profit educational institutions to develop and expand their current teaching offer in higher education (undergraduate level), extending it to all disciplines, in the sciences and the humanities, to cover all curricular needs.

This recommendation would help create a coherent body of standards and formats, for exchange across currently existing websites. It would help reduce costs while expanding the network of distributed intelligence worldwide, by the pooling of human and physical resources. The recommendation could also push further the open publishing concept, by setting procedures to explain and enhance it (the teachers as others remaining responsible for content). This would promote sustainability at the local and regional level while encouraging exchanges of materials around the world, in the spirit of pluralism and cultural diversity.

This recommendation could thus address some of the major issues of WSIS, regarding Intellectual Property, patents and licensing, open publishing processes, teacher continuous training, end-user support, interoperability, transferability, and evaluation. A variety of models, contents and teaching methods could thus be made available for shared knowledge societies. It would also allow for research to expand, as other activities could develop from the consortium, like conferences, face to face seminars, policy dialogues, etc.

➢ **Free Software** (see Fsfeurope's Input to the Political Chapeau and Operational Part)

➢ **Research**

The taskforce recommends the creation and implementation of an « International Researchers' Charter for Knowledge Societies », currently being drafted by IAMCR (International Association for Media and Communication Research). This Charter aims at establishing the rights and obligations of the research community (all disciplines included) in the Information Age. It proposes a number of principles, among which the right to seek, retrieve and distribute research results freely, the respect of the status of researchers for independent, open and fair working conditions, the free access to archives, libraries, universities and other entities funded through public resources.

The Charter proposes a certain number of means to implement these rights and obligations, and calls on the research community but also on the state and the private sector to recognize those tenets and implement them, in the name of civil society empowerment and capacity-building. It urges them to establish or invent instruments for the improvement of the status of research, for making it independent from an ICT-technical drive only and biases deriving from commercial interests, so as to improve its relevance to education, academia and society at large.

The education taskforce also calls for more research in the follow-up process of WSIS. If the

outcome of the process is to create "Issue teams" for ICT applications as described in the Annex, to implement the main action lines, then we strongly recommend that the research community be implicated from the start. The Issue Teams will need to produce reports and other publications and assessments of the process and these should be research-based, for the sake of quality, coordination and overall legitimacy.

> ## Community informatics

The education taskforce recognizes that there are a number of areas where the current approaches to ICTs for Development financing have devoted insufficient attention to date. These include:

•Development of community-level training programmes within target regions in community informatics, computer science, engineering and related disciplines to allow communities to design and manage socially appropriate ICT-based solutions;

•Support research and education in target regions in engineering and design methodologies that foster the involvement of communities in the design, implementation and management of ICTs they decide to use;

•Support ongoing international conferences, publications, and other communications mechanisms that will allow researchers and practitioners in community informatics, computer science, engineering, the social sciences and other ICT-related disciplines to exchange information about technically sound and ethical practices in the design, use, and management of ICTs.

Addressing chapter Two, "Financial mechanisms [for meeting the challenges of ICT for development]" --TFFM

The education taskforce feels that the document in general seeks to improve existing financial mechanisms, with a major focus on infrastructure to the detriment of capacity-building and content-development. Without denying the importance of such mechanisms and infrastructures, the taskforce would like to recall that ICTs are the means to an end, the general improvement of our human development. Hence the articulation of these means to social and cultural development should be made more apparent, with clear mention of targets, actors, processes and expected human outcomes. The emphasis should be placed more on targets like community empowerment, actors like women, processes like open courseware and expected outcomes like distributed intelligence networks for shared knowledge.

The education taskforce supports the idea that financial mechanisms in education and research are necessarily linked to multi-stakeholder partnerships. The mention of all stakeholders and the principle of solidarity seems weak and vague. The taskforce fears that the emphasis is on the governments and private sector, confining civil society to ancillary tasks. This denies the fact that the different entities constituting civil society, especially NGOs, researchers and local authorities have been very instrumental actors in developing knowledge societies and should be present in a more egalitarian position, from the outset, with a clearer definition of their status, funding and tasks, in a co-regulatory vision of world governance. Formal and informal partnerships should be made more explicit, especially as civil society organizations for education and research should be seen as having a stake not just in implementing policies but in devising them, in creative and constructive ways.

Addressing chapter three, in relation to "internet governance and internet-related public policy"---WGIG

As the document doesn't yet offer a full section on this issue, the taskforce can only recommend that the new items offered here be integrated within the framework of WGIG as media and ICTs,—especially in the larger understanding of internet governance—are crucial for education and research development, and symmetrically, education and research are crucial to the development of Internet and attendant technologies itself.

The education taskforce also believes that more efforts have to be made to push for public awareness on Internet governance. Every citizen is a potential netizen and he/she should rightly understand how the Internet works since it is generating our knowledge environment. Much of the substance of the WGIG Issue Papers should be included into educational and teaching material on all levels around the globe. WSIS II is an ideal opportunity to make this call, primarily to the public media and to the educational and training institutions. To establish a viable and dynamic creative commons society, people have to understand how the DNS is functioning, how IP addresses are allocated, what basic legal instruments exist in fields like cyber-crime, Intellectual Property Rights, eCommerce, e-government, human rights and development etc. They also have to be aware of diverging positions, according to the point of view of the different stakeholders and make educated decisions as to what they think is best for them. This applies to people both in the developed and developing world and if not attended to urgently may give the feeling that WSIS is serving the elite, when it has to serve the people.

Addressing Chapter 4, "the way ahead"

The education taskforce sees the need for plural and alternative models for the production and exchange of knowledge and information. To secure and finance the global knowledge commons, it supports multi-stakeholder partnerships and an integrated vision, around the paradigms of openness and distributed intelligence networks :

 ➢ new models for building information and knowledge competence on all levels of education and training, by encouraging the free flow of knowledge, by recognizing the central role and multiple functions of libraries, by convincing content producers to be active participants in the open access paradigm of knowledge and the global public domain;

 ➢ e-learning extensions and long-distance education transfers, complementary to traditional educational resources and methods, in combination with community media, in a local context of media pluralism and linguistic diversity ;

 ➢ new open and self-organized publishing models in science and software production and community-based communications, with in-built maintenance programs and upgrading capacities;

 ➢ transparent evaluations of global barriers to knowledge, research and education, looking beyond technological obstacles at legal and institutional gridlocks (like Intellectual Property laws and International standards) and promoting a new balance of intellectual properties as a common ground for authors, creators and teachers to protect their works and for civil society to benefit from their contributions;

> new designs of degree and diploma accreditations, even when dealing with international or regional educational agencies, granted by local legitimate entities, in keeping with their expectations of content and practices.

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For further reference (not exhaustive) :

http://www.eccr.info/   http://www.ciresearch.net/
http://www.cpsr.org/   http://eff.org/
http://epic.org/   http://www.gnu.org/education/education.html
http://www.mediamentor.org   http://www.itrainonline.org
http://fsfeurope.org/projects/education/argumentation.es.html
http://fsfeurope.org/projects/wsis/wsis.en.html

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