## **Eighth Session of the United Nations Commission on Science** and Technology for Development

# "Infrastructure Building as a Foundation for Scientific and Technological Development"

#### Statement by Mr. Talal Abu-Ghazaleh

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Arab Internet Governance Forum (AIGF)

Geneva, 23-27 May 2005 Palais des Nations, Room XXVI

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Item 2 – Substantive theme: "Science and technology promotion, advice and application for the achievement of the Millennium Development Goals"

Chairman,
Distinguished Delegates,
Ladies and Gentlemen,

I am honored to be here with you, albeit in a very modest minority of one, the private sector, as the reprehensive of a leading international group of professional service providers in IPR, consulting, law, accounting and technology transfer.

The roles of government, inter-government organizations, scientists, and innovators are rightfully well-recognized in this commission.

I urge you to equally reorganize and to actively engage another stakeholder: BUSINESS.

Business commercializes inventions and, thus, makes them available to humanity for development. Business provides a valuable environment for R & D and for creativity. Business supplies the downstream facilities without which inventions would remain in the possession of their inventors only.

In September, when Member States convene at the High Level Meeting of the General Assembly to consider the progress made toward the achievement of the development goals contained in the Millennium Declaration, they will be forced to conclude that, on the current trajectory, many countries will fail to meet the targets affirmed by world leaders in 2000. Let me emphasize: on the current trajectory. Employing new strategies, however, may allow the international community to assume a new course that will lead to success.

My fellow speakers join me here today to deliver that message: that all of us – speakers and delegates, as individuals or groups – can bring to bear our expertise and experience in the many sectors of science and technology to halve poverty, achieve universal primary education, reverse the spread of HIV/AIDS, ensure environmental sustainability, and meet the other MDGs. Appropriately supported and applied, science and technology may help us turn these "goals" into "accomplishments" by 2015.

As we know, the Commission on Science and Technology for Development, under its 2004-2005 inter-sessional theme, "Science and Technology Promotion, Advice and Application for the Achievement of the Millennium Development Goals", has taken up three sub-themes on infrastructure building, science and technology education, and promoting employment and enterprise development.

It should be evident that all three are closely inter-connected. At this time, though, I will speak predominantly on the first sub-theme: Infrastructure-building as a foundation for scientific and technological development.

I intend to highlight some of the main points that were included in the excellent report of the UNCTAD Secretariat for the Commission, which you have before you, and to reiterate some of those included in the comprehensive report by the United Nations Millennium Project Task Force on Science, Technology, and Innovation with which I hope you are all familiar. I will also, of course, share some of my own experiences and views.

As we know, infrastructure in its broad sense includes the whole concept of robust facilities and processes which enables a functioning and growing society, from delivery of clean water and provision of public health facilities, to reliable access to electricity and development of human resources through the nation's school system. As the Task Force 10 report explains, infrastructure increases the returns to labor and other capital. The presence of reliable infrastructure, therefore, is a key factor in attracting foreign direct investment. Infrastructure is linked very closely to innovation creation and diffusion in that high-tech endeavors tend to utilize infrastructure more aggressively than other sectors. In a self-reinforcing process, the development of new innovations subsequently contributes to more and better infrastructure and this leads to better odds of meeting the MDGs.

Inadequate infrastructure frustrates poverty reduction and the achievement of other Millennium Development Goals. Infrastructure deficiency in the developing world severely limits countries' technological capabilities and diminishes the likelihood of creating opportunities for education and economic growth.

Ensuring adequate infrastructure and developing human capacity in science and technology requires a huge investment and long-term commitment, but there is a great return to be reaped. The reports illustrate that strengthened education systems and the strategic deployment of infrastructure combine to be a powerful engine of economic growth when brought together in enterprise. This is crucial to helping the developing countries to move up the value chain, for instance from subsistence agriculture to commercial agriculture, or from labor-intensive manufacturing to technology-intensive manufacturing. This will create new job opportunities and improved standards of living for a large number of people in the developing countries.

If we aim to stimulate research and development in science and technology, ICT infrastructure is particularly important. In our emerging knowledge-based economies, a reliable information and communications infrastructure is essential for collaboration within and between countries, including the conduct of research, and for facilitating linkages between education and research institutes, industries, and governments.

This special role of ICT is underscored in the Eighth MDG, which asks, among other things, that Members States, "in cooperation with the private sector, make available the benefits of new technologies—especially information and communications technologies". During the several years I have served as Vice-Chairman of the United Nations Information and Communication Technologies Task Force, we have expended great energy on promoting the link between ICT and development. The incredible versatility, scalability, potentially high rates of return on investment, and other positive characteristics make ICT a core enabler of development.

Only a short time ago, infrastructure projects were viewed as isolated issues, not related to other areas of development. But in the 1990s, international financial institutions intervened, with private sector investment and participation, to promote infrastructure deployment as a means of stimulating growth. Today, governments must play a more active role in providing for their future economic and social health by making infrastructure projects a cornerstone of national strategic planning. To promote ICT infrastructure, for instance, we need to see a liberalization of the local telecommunications markets and the creation of adequate legal protection to attract investments into ICT. Appropriate competition policies and sectoral regulations are also needed.

With support from institutions like the United Nations as well as the donor community, governments can strengthen their national technological and scientific capacities by devising policies to link up to research networks,

encourage technology transfer, and build indigenous capabilities through education and collaborative projects. A multi-stakeholder effort is needed, and public-private partnerships should be pursued for social benefit.

We have much reason for optimism. Already, we have observed that out of the MDGs, the area of science and technology has made the most rapid progress and is "on-track". But it is within a broad and integrated development approach, rather than simply as a stand-alone production sector, that science and technology, especially ICT, will most profoundly impact the MDGs. As I asserted earlier in my statement, I believe reaching the MDGs will require a substantial change in development policies, a change that recognizes and incorporates to the fullest extent possible, science, technology, and innovation.

As the Task Force 10 report indicates, the challenge for those wishing to facilitate the achievement of the MDGs by promoting science, technology, and innovation is to identify and implement those infrastructure services that will most impact the Goals. Different types of infrastructure will require different policies and approaches.

Infrastructure planning should not be conducted in isolation but rather in conjunction with other components of the national science, technology, and innovation system, including education and human resource development, technology forecasting, and research and development strategies. This undertaking will impact many aspects of social and economic development planning, because, as we all know, infrastructure:

- ...availability affects production and consumption.
- ...costs affect profitability and competitiveness.
- ...services (electricity, transport, telecom) affect the productivity
- readiness attracts businesses.
- ...readiness promotes efficiency and the development of STI.
- ...provides a foundation for technological learning.
- ...contributes to technological development in all sectors of the economy.
- ...quality impacts environment.
- ...conditions influence the level of technology transfer.
- ...availability mobilizes project research facilities.
- ...is the foundation of technology for development.
- ...should become an investment priority in governmental strategies.
- ...planning should be seen as a requirement for sustainable development.
- ...should address social and environmental objectives.
- ...benefits from and is developed through STI developments.
- ...contributes to capacity building, creativity, and R &D.

- ...is a multi-stakeholder responsibility and benefit.
- ...harnesses the unlimited potentials of STI for the achievement of all goals.

Professor Calestous Juma summed this up by saying: "Because infrastructure uses a wide range of technologies and complex institutional arrangements, its developments provide a function for technological learning. Infrastructure is also critical in attracting foreign direct investment. Developing countries need to strengthen their infrastructure and enhance their ability to develop, operate, and maintain infrastructure services." (Juma, Calestous, Yee-Cheong, Lee. 2005 "Innovation: Applying Knowledge in Development")

And as the Commission Report makes clear, education and enterprise development must be pursued simultaneously in a coordinated and integrated manner. If action is taken by national, regional, and local governments in partnership with the development community and private sector to truly leverage science and technology, I believe 2015 will be a year for great celebration.