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2004 Technology Fair of the Future

14 -18 June 2004, São Paulo, Brazil

UNCTAD XI

REPORT

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

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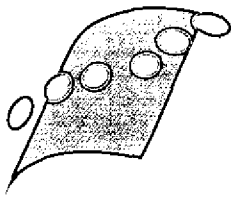

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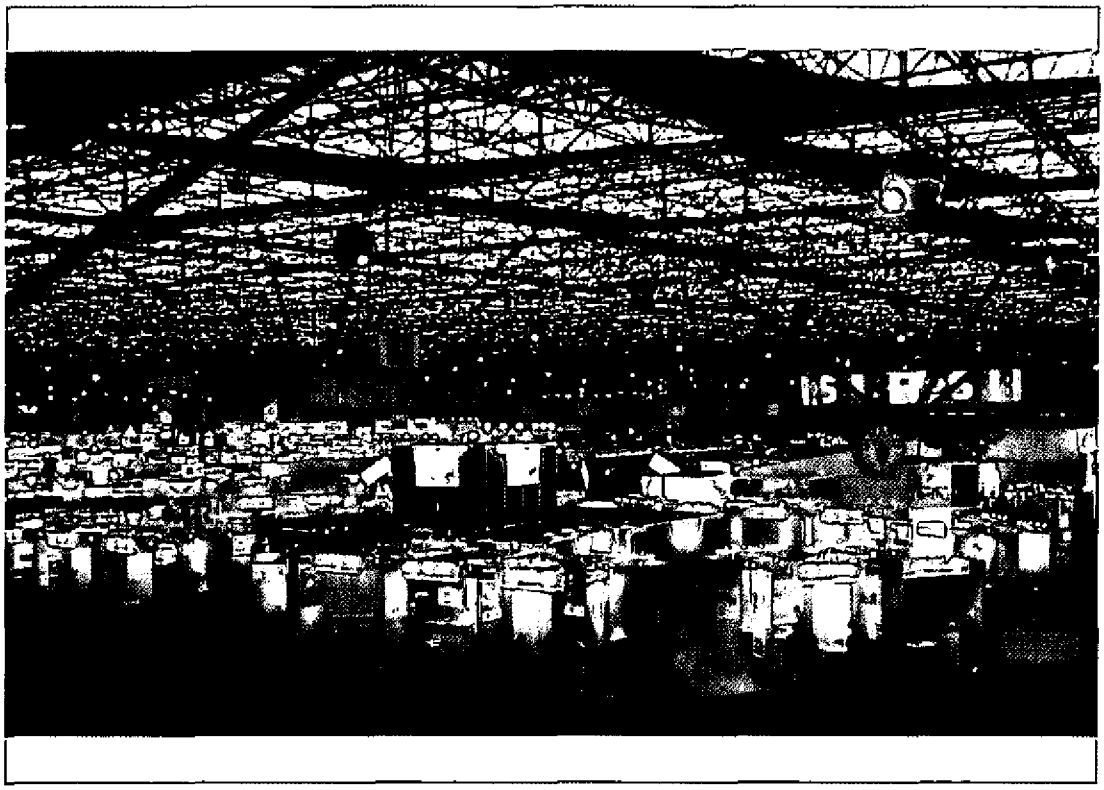


INTRODUCTION

The 2004 Technology Fair of the Future was organized by UNIDO in cooperation with UNCTAD, as one event of the UNCTAD XI General Conference, and was financed by UNIDO and the Governments of Austria and Brazil. As a part of the UNCTAD Trade Show, the Fair was held at the Anhembi Exhibition Centre in São Paulo, from 13-18 June 2004. The UNCTAD Trade Show was composed further by the following events: ITC Competitiveness Tools Fair, the WAIPA Investment Forum, the Space Brazil on Investments, the Brazil Tourism Fair, the São Paulo State Fair FAO Exhibition, the SEBRAE Forum and the India Handicraft Exhibition. At the same time an industrial fair took place, namely the FISPAL Twentieth International Food Fair, Latin America's leading food products fair.

The Technology Fair aimed to gather different stakeholders from businesses, academia, research and development institutions, innovation support institutions, policy-making bodies and international organizations to exchange new ideas and concepts on how to leverage new technologies for economic development. Technology sectors covered were energy and environment, biotechnology, nano-technology, materials, information and communication, and aerospace. Also represented were technology sectors important for low-income and least developed countries (LDCs), such as agro-industry, building materials and renewable energy.

The concept of the Technology Fair was to offer innovative enterprises—especially those small- and medium-sized, and innovation support institutions from developing countries and economies in transition—the opportunity to participate at a minimum cost and maximal benefits. To lower the participation costs, UNIDO covered the basic installation and facilities of the Fair, and companies could participate by different ways: exhibition, presentations and/or videos. By the same token, the exhibition was meant to be in the form of posters, promotional models and the presence of researchers or innovators at the stands. To raise the benefits for participants at the Fair, different forms of interaction among the companies and visitors were proposed, such as technical discussions at the stands, forum and discussions with experts and high officials, monitored business meetings and videoconference. The logistics of the Fair contemplated all these instruments.

INAUGURATION

The inaugural ceremony took place on 13 June 2004 and was opened jointly by Ambassador Rubens Ricupero, Secretary-General of UNCTAD and Mr. Carlos Magariños Director-General of UNIDO. The host country, Brazil, was represented at the ceremony by Minister of Foreign Relations Ambassador Celso Amorim and Secretary for Industrial Technology, Mr. Roberto Jaguaribe, acting on behalf of the Minister for Development, Industry and Trade, Mr. Luiz Fernando Furlan. A number of high-level government officials and business representatives also attended the ceremony, including Prof. Calestous Juma, Coordinator of the MDGs Task Force on Science, Technology and Innovation and Professor at Harvard University.

THE FAIR AND ITS EVENTS

The Fair took place from 14 to 18 June 2004 and included the Exhibitions, Business Meetings and Forum on Technology Trends and Needs in Global Value Chains. Side events included: face-to-face business meetings between the participating enterprises, and discussions between enterprises and policy makers from various developing countries, as well as video-conference and multi-media presentations.

At the Exhibitions, from 140 technology firms and institutions that were selected to participate in the Fair, some 107 firms and institutions from 14 countries presented a wide range of innovative technologies in agro-food, energy, ICT, biotechnology, aerospace, materials, electronics and nano-technology, as well as innovation support services They exhibited their work at the stands or in different ways during the event, such as by posters, products and related material, prototypes, computer-aided visuals and installations. They were distributed in 46 booths, some occupying one booth others shared booths, or were represented by companies attending the Fair, other companies alternated their presence at the Exhibitions during the event. According to the end-of-event evaluation, a total of 80 enterprises and institutions participated actively at the Exhibitions, and represented 27 other companies. They involved 202 persons, most of them researchers, innovators, technology managers and CEOs, who attended the Fair and participated in the discussions and meetings at the different events. Twelve companies also made use of multimedia resources to show videos on their ideas, lessons of experience, concepts, prototypes and target markets in their respective technology sectors. One video conference was held between interested parties of the Fair and a group of experts in Germany. This exercise was co-organized by the Germany-Brazil Technology Institute, which is linked to the bilateral trade chamber. Figures on the participants are shown in the annex.

Some UNIDO related institutions were involved both in mobilizing enterprises and providing

India participation and its results

- *ICAMT mobilized and participated along with 10 companies/institutions.*
- *There were about 160 enquiries, where 42 could result in follow-up actions.*
- *Noteworthy among them were 21 enquiries with ACEN Language Lab from Brazil, China, Nigeria, Kenya, Dubai and Turkey showing interest to franchise its language hardware and software set-up. Sona Group had six serious enquiries for trading and also software tie-up with CESAR of Recife, Brazil.*
- *Three companies from the Czech Republic showed interest to have tie-ups with CMTI in the area of CAD/CAM/CNC/5-axis and also metrology and quality control equipments. Embraer has shown interest for partnership with CMTI in technology development in the field of manufacturing of aircraft components.*
- *ICAMT has agreed to forge a partnership with IPT, Brazil (plastic processing and testing, leather testing), Technology Centre of Czech Republic (small hydro turbines and wind turbines), North-Western International Cleaner Production Centre, Russia (waste recycling and sensor application in machining process), ICM, China (building materials), ICS, Trieste (low cost housing).*
- *There were six serious requests to ICAMT/BMTPC for transfer of low-cost housing technologies to Peru, Brazil, Nigeria and others.*
- *A programme for fostering partnerships with companies of India and EU countries (Czech Republic, Hungary, Poland and Slovenia) in the field of ICT and Electronics will be developed by ICAMT and ESC to present to EU for possible funding.*
- *A programme for partnerships of Indian companies and Brazilian companies will be developed in the area of introduction of Embedded Software Technology in the Automobile-Components sector.*

on-site assistance, such as ITPO Paris, ITPO China (Beijing), ITPO Brazil (Recife), ICS, ICAMT, Cleaner Production Centre Saint Petersburg and ICGEB. These institutions will carry out follow-up activities. An example of UNIDO related institution assisting the Fair is presented in the box above.

With regard to the Forum on Technology Trends and Needs, its daily programme included two main components: *(a)* oral presentations by enterprises from different technology sectors and countries, from 9:00 a.m. to 13:20 a.m., and *(b)* Forum thematic panel, from 14:30-18:00 p.m.

At the oral presentations, 23 enterprises and institutions from seven countries gave corporate information on their field of work for the present and the future, outlining the main issues related to their areas of innovation and respective technology areas.

The Forum on Technology Trends and Needs in Global Value Chains consisted of four panels: Global Value Chains and Networks: Opportunities and Challenges; Technology Trends-Foresight Results; Technological Parks: Their Future in Developing Countries and the Future of Innovative Enterprises: Local or Global Markets. The attendances of panel programmes were

academics, business people, policy makers and representatives of media. They were engaged in presentations and interactive dialogues focusing on challenges and opportunities for technological upgrading in global value-chains (GVCs) and production networks (GPNs).

A catalogue with a CD-Rom including the 140 companies and institutions from 25 countries selected to participate at the Fair, which compiles corporate information and technology offers from participants, was distributed during the Fair and will be disseminated by UNIDO and UNCTAD.

MAIN ACHIEVEMENTS

According to the end-of-event evaluation, the main achievements are indicated below.

➢ *The exhibitions and oral presentations gave the opportunity of exposing the enterprises and institutions to potential counterparts. Most of the participants reported that the Fair was very instrumental for them in the sense of identifying possible partners for technology development and market access. A total of 462 business contacts were reported at the end-of-event evaluation. One company reported technology transfer and licensing businesses to a total of US$ 2.5 million.*

➢ *During the face-to-face arrangements, participants at the Fair had the opportunity to present technology offers and to discuss and evaluate businesses opportunities and target markets for joint operation and partnerships. A total of 28 monitored business meetings have been reported and 18 follow-up forms have been submitted to UNIDO. Trainees from the Germany-Brazil Technology Institute cooperated voluntary in the conducting of the business meetings.*

➢ *Regarding the Forum, the participants were very enthusiastic about its programme and achievements. Each panel of the Forum was attended by between 50-60 experts including the panelists. All invited panelists came to participate in the Forum panels and some of them attended several panels. They were engaged in interactive dialogues. Most of the panelist considered the theme of their panel very important and timely, for both enterprises and governments at different levels, regional, national and international. The exercise provided UNIDO and UNCTAD with new visions and concepts for their work in the innovation field. A summary on the discussions of the panels is attached.*

➢ *According to a general evaluation made by participants at the Fair, they were impressed with the level of the projects and their representatives. They were very satisfied to find not only interesting new projects and technologies, but also to be able to discuss them with the people involved in research and development. This allowed the participants to understand the new ideas more deeply. The possibility to discuss with developers, instead of with sales persons who are not involved in the development of technology, made a substantial difference. The proximity of people*

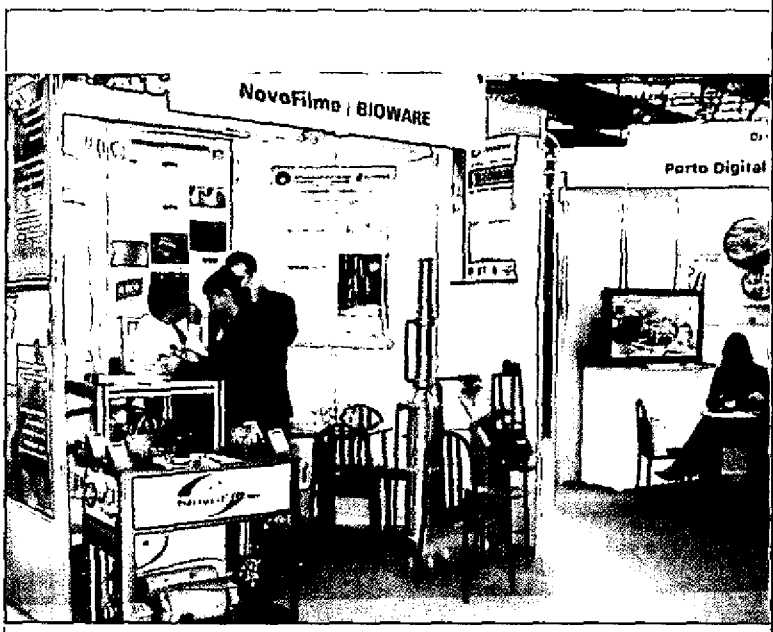
with different interests, projects and businesses, but with a common item which is the strong interest and curiosity in science and technology, differentiated the Technology Fair from usual industrial fairs. In this way, the Technology Fair can be characterized as an expert fair.

➢ *One important factor at the Technology Fair of the Future was that the majority of the projects are not yet fully established in the market. Many need further research or investment to become market ready. The participants were eager to find counterparts with whom they could discuss the development of the product or technology and take it to its next stage.*

➢ *Ministers and high level government officials participated in the panels and discussions. This provided a unique opportunity for enterprises to discuss with high officials and know a government's position on important aspects of how they see technology and of the existing official programmes. Participants considered that the UN environment was vital, in this case, because governments tend to take position far from those who are producing science and technology. With the initiative of UNIDO, both groups were placed side-by-side, generating conversations and sparking interests that otherwise would simply not have occured.*

➢ *Another important consequence of the fair was that UNIDO gathered projects and companies and placed them under a strong and important light, that of "those with future technologies". This has called the attention of authorities, investors and marketing to look at what is being developed within participant countries highlighting where mutual collaboration can be developed. Participants considered this factor as the most important aspect of the fair, which should be exploited with greater emphasis in the future.*

➢ *Being part of a mega event and due to a special public relations exercise conducted by UNIDO, the local and international media gave a broad coverage of the Technology Fair. It is worth highlighting that the Fair offered UNIDO a unique opportunity to present itself and its programmes in Brazil. Media coverage on UNIDO Technology Fair of the Future and UNIDO in general comprised 24 articles including most important newspapers and TV broadcasting. A well-known economic review is interested to publish a signed article on the concept and results of the Fair. The details of the press coverage are given in the annex.*



➢ *The presence of high Brazilian officials at the UNCTAD XI, gave UNIDO the opportunity to organize bilateral meetings with two ministers, Mr. Eduardo Campos, Minister for Science and Technology, and Mr. Luiz Fernando Furlan, Minister for Development, Industry and Trade. The agenda of these meetings concentrated on the emerging issues related to the new Brazilian industrial, technological and trade policy, the proposal of UNIDO to create a network for technology upgrade between selected developing countries and economies in transition and support to some government initiatives such as the Biotechnology Center of the Amazon region.*

➢ *Finally, the event featured some by-products, such as a data-bank on innovative enterprises in developing countries and economies in transition, a new software for matchmaking at business meetings, and a new software for electronic publishing (used to produce the Fair catalogue). These instruments will facilitate the implementation of other Technology Fairs.*

Summarizing the Technology Fair of the Future as a first event it appears an interesting product for UNIDO to assist developing countries to leverage new and emerging technologies for economic development. This event was set up in a way to be replicable in similar conditions, such as during UNIDO General Conference and/or as a special feature of industrial fairs addressing developing countries needs.

SUMMARY OF OPENING STATEMENTS AT THE INAUGURAL CEREMONY, 13 June 2004

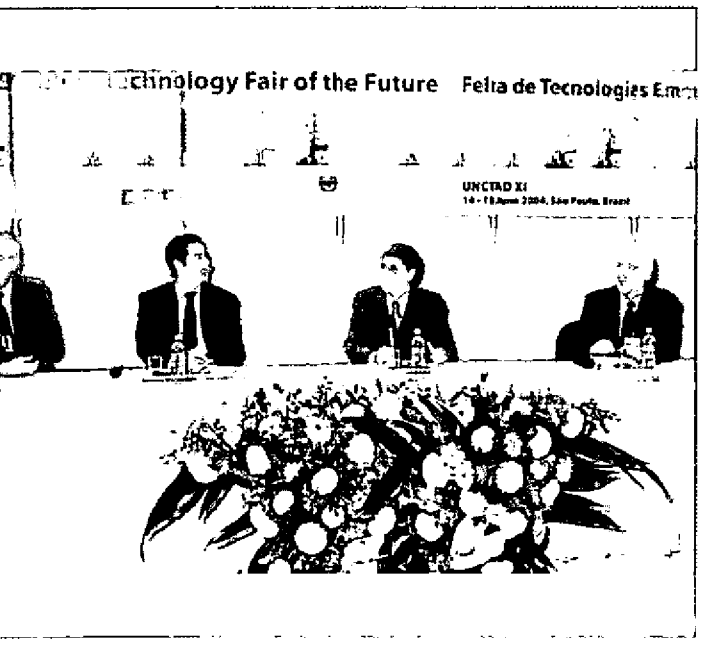
Mr. Carlos Magariños, the Director-General of UNIDO, stated that the idea of the Fair was to explore how to help developing countries effectively take advantage of the opportunities of international trade and investment flows. Trade reform and macroeconomic reform alone would not bring about development; success stories from some of the Asian countries attested to the importance of a dynamic private sector, through which business opportunities could be realized. UNIDO was dedicated to seeking practical solution technologies that would help increase the industrial competitiveness of the developing countries, allowing them to integrate effectively into the global economy. Mr. Magariños stated that the aim of the Fair was two-fold: first, to address how technology could be better leveraged to help developing countries achieve the goals contained in the Millennium Declaration, particularly in poverty alleviation; second, to offer participating enterprises and technology institutes the opportunity to present new ideas and innovations in their fields of specialization. It would also offer participants a platform to forge partnerships, linkages, strategic alliances and joint ventures for improved access to market.

Mr. Rubens Ricupero, Secretary-General of UNCTAD, extended his gratitude to UNIDO for making the event possible. He welcomed the collaboration of UNCTAD and UNIDO, two United Nations entities that share a common vision. He emphasized the central importance of industrialization to development, as well as highlighted the important link between trade and employment. Mr. Ricupero noted with concern that most developing countries rely on commodities such as agricultural products or minerals, with very few countries that have reached a stage where value-added, high technology content commodities are produced. He underlined the need for developing countries to make their presence felt in the new and dynamic sectors in international trade. Mr. Ricupero concluded that it was high time that the supply side were examined, to explore how

developing countries could diversify and add value to their commodities, thereby increasing their competitiveness in world trade.

Ambassador Celso Amorim, Minister of Foreign Relations, congratulated UNIDO and UNCTAD for realizing the Technology Fair following his request and ideas. Brazil, as many developing countries, considered technology development as a vital basis for progress in the future. The demonstration of strengths in developing countries in harnessing emerging technologies to meet the challenges of economic development was an important argument towards facilitating access to international markets for technology intensive products and services. The Technology Fair in the context of UNCTAD XI served this purpose.

Mr. Roberto Jaguaribe, on behalf of Mr. Luiz Fernando Furlan, Minister for Development, Industry and Foreign Trade of Brazil, observed that the event was timely for Brazil, as it had recently drafted its industrial and technology policy. Mr. Jaguaribe noted that the new policy focuses on innovation, as well as technology development, especially in such areas as materials, information and communication technologies (ICTs) and nanotechnology. He emphasized the crucial importance of ICTs as a pervasive technology, which would be a differentiating factor between countries that are successful and those that are not. He stated that Brazil attached great importance to agro-business, as well as technology in trade negotiations. Mr Jaguaribe also addressed the importance of intellectual property rights (IPR) in stimulating innovation, but also pointed out that IPR should not constitute an impediment to the sharing of knowledge by development countries, resulting in an uneven concentration of knowledge and technology.



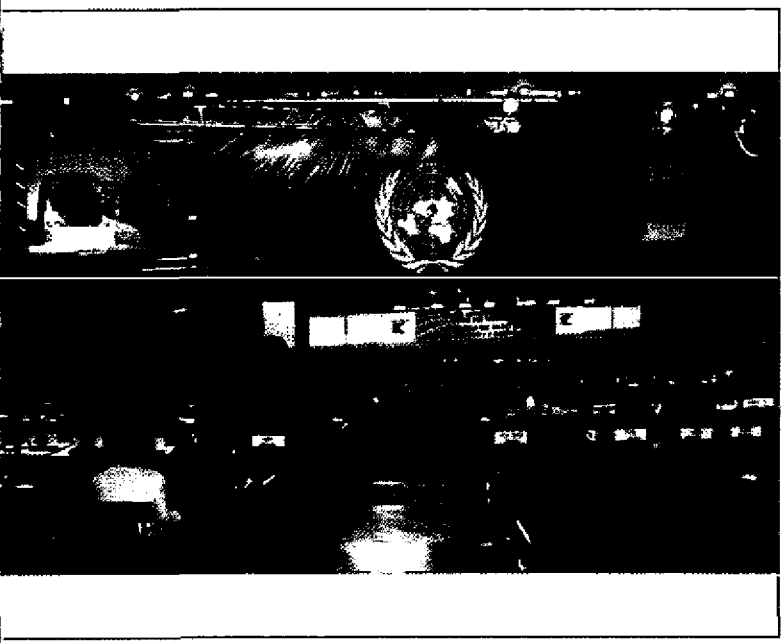
ROUND TABLE ON HARNESSING EMERGING TECHNOLOGIES TO MEET THE DEVELOPMENT GOALS CONTAINED IN THE MILLENNIUM DECLARATION, 14 June 2004

Keynote speakers included: H.E. Eduardo Campos, Minister of Science and Technology of Brazil; Honorable Jeyaraj Fernandopulle, Minister of Trade, Commerce & Consumer Affairs of Sri Lanka; Dr. Derek Hanekom, Deputy Minister of Science and Technology of South Africa; Ambassador Walter Lichem, Director-General, Ministry of Foreign Affairs of Austria; and Mr. Talal Abu-Ghazaleh, Vice-chairperson of the United Nations ICT Task Force. The Round Table was moderated by Prof. Calestous Jume, Chair of the United Nations Millennium Project Task Force on Science, Technology and Innovation.

Speakers reaffirmed that the application of science and technology, building upon local knowledge, skills and materials, was central in facilitating the achievement of most MDGs, especially in such areas as combating poverty, improving the lives of women, and combating diseases, and that most developing countries are unlikely to meet the Millenium Development Goals (MDGs) without making science

and technology top priorities on their development agenda.

Tackling poverty through applications of sciences and technology would not necessarily require more knowledge generation. More importantly, the international community needed to address the institutional gap between knowledge generating institutions and international policy-making. One speaker pointed out that at the inter-governmental level, institutions of knowledge creation lack points of contacts



within the United Nations system. There was no equivalent of, for example, a Global Compact for the scientific community that would allow it to be represented in the policy-making processes at the global level. This had led to the marginalization of science and technology on the international agenda. Speakers called for mechanisms, such as the Commission on Science and Technology for Development, to create networks and linkages to the political agenda and to bring scientific knowledge to inform international decision-making.

Speakers underscored the importance for developing countries to strengthen indigenous scientific and technological capabilities, through increased investment in science education at all levels, and adapt public universities and research institutions to make them relevant to development. They also highlighted the important role of scientific research, technological innovation, technology transfer and technical cooperation in the building of science and technology capabilities.

Science advice in most developing countries tended to be ad hoc and non-central to the decision-making process. It was therefore important to institutionalize science advice, including the creation of science advisory bodies to ensure that government made decisions based on sound science and that science would be used as a tool for development by anticipating and minimizing risks and capitalizing on opportunities.

Several speakers underlined the importance of effective harnessing of simple and mature technologies to serve development needs, while reiterating that promoting the development and application of new and emerging technologies, most notably biotechnology ICTs and nano-technology, would both reduce the cost and increase the likelihood of attaining the MDGs.

On the issue of technology transfer, one speaker observed that whilst the TRIPS agreement of the WTO had clearly defined disciplines on intellectual property rights (IPRs), it contained only a goodwill statement which "encourages" developed countries to transfer technology, without a binding discipline. In this context, the relevant clause in the TRIPS agreement should be revisited to make it more development-friendly.

Speakers also noted with concern the under-investment in development-related R&D. More and more research was directed for profits

rather than solving the problems that are the banes of humanity; 90 per cent of the world's diseases receives a mere 10 per cent of total R&D expenditure.

Given the global inequality in income, truly sustainable development can only be ensured through democratic participation of all nations in science and technology governance and cannot be left to the highly idealized concept of the "market". Equitable health care can only come from new models of R&D in the field of health. The international community was called on to explore ways of conducting research and development that are not market-driven.

Speakers also shared national experiences in mobilizing science and technology for social and economic development. The recently drafted industrial and technology policy of Brazil focused on national systems of innovation, and also technology development, especially in such areas as materials, information and communication technologies (ICTs) and nano-technology, as effective tools for poverty alleviation. The Government of Sri Lanka had recently established an Information and Communication Technology Agency, the mandate of which was to implement an "e-Sri Lanka Road Map", a comprehensive, nationwide ICT strategy. One key objective of this strategy was to ensure that networking was expanded to the rural areas of the country, and to encourage the use of innovative technology solutions, such as solar-powered stations to connect small isolated communities. Recognizing that a strong human resource base was crucial in technology development, adaptation and diffusion, Sri Lanka had embarked on a programme to rapidly expand private and public sector education in ICTs.

The Government of South Africa had set up a comprehensive and ambitious programme with concrete targets on the provision of clean running water, basic sanitation, and housing. In addition, it would invest more than 15 billion dollars in infrastructure over the next 10 years. Innovation, and the use of new technologies, in particular, biotechnology, ICT, and advanced manufacturing, would play a vital role in the implementation of these plans. A Government programme has also been set up to transform government poverty relief programmes into community-driven and economically viable, and sustainable enterprises by transferring technologies to small-and-medium-sized enterprises (SMEs). While striving to meet basic needs, the Government had also identified a number of areas where it has competitive advantage for further development. In this respect, it aimed to take advantage of its geographic advantage and turn Southern Africa into a region of excellence in space technology and astronomy. The Government was currently in the process of reviewing its policies to effect a shift from technology transfer to technology partnership, with the recognition that more

attention should be directed to education, which would help build up human capacity not only in the adoption and mastery of technology, but also the capacity in innovation and technology development. South Africa was also planning to assess implementation of the recommendations related to science and technology that had emerged from the Johannesburg Summit a few years ago. International organizations, such as UNCTAD and UNIDO, would be called on to participate in this exercise.

THE FORUM ON TECHNOLOGY TRENDS AND NEEDS IN GLOBAL VALUE CHAINS

The Forum on Technology Trends and Needs in Global Value Chains consisted of four panels: Global Value Chains and Networks: Opportunities and Challenges; Technology Trends-Foresight Results; Technological Parks: Their Future in Developing Countries and the Future of Innovative Enterprises: Local or Global Markets. The attendances of panel programmes were academics, business people, policy makers and representatives of media. They engaged in presentations and interactive dialogues focusing on challenges and opportunities for technological upgrading in global value chains (GVCs) and production networks (GPNs).

Panel 1: **Global Value Chains and Networks: Opportunities or Challenges,** 15 June 2004

Panelists included Prof. Mike Morris, University of Natal, South Africa, Prof. Afonso Fleury, University of Sao Paulo, Brazil, Gabriel Sanchz, Fundacion Instituto de Capacitacion en Negociaciones Internacionales, Argentina, Joao Furtado, State University of São Paulo, Brazil, and Prof. Sanjaya Lall, Oxford University, United Kingdom. The Panel was chaired by Mr. Sergio B. Varella Gomes, BNDES, Brazil, and moderated by Dr. Olga Memedovic, Strategic Research and Economic Branch, UNIDO.

The spread of global value chains (GVCs) and production networks (GPNs) has opened up new opportunities for developing countries and enterprises. The associated welfare gains, for example, are estimated to be 10 to 20 times larger than those from simple trade liberalization, due to specialization by dynamic comparative advantages. Plugging into global value chains and production networks can provide better access to the skills, knowledge and technology of leading players as well as to the global markets they are serving. The spread of GPNs in developing countries is, however, highly uneven, with East Asia and Latin America accounting for the bulk of GPNs. Additionally, this new business scene also presents challenges for developing countries, with competitive pressures becoming more intensified than ever before. While some regions and countries, most notably the East Asian ones, have successfully upgraded their technological and industrial capabilities, to compete and sustain competitiveness, the majority of developing countries lag behind. In addition, the technological gap between countries has also been widening.

It is against this background that the Panel addressed the following questions:

- *How to meet intensified competitive pressures, as the opportunities are extended to a large number of developing country producers?*

- *How to sustain competitiveness as wages rise and market conditions change?*

- *How to develop local capability to effectively leverage local and external resources to reap the benefits of the new market opportunities?*

Panelists recognized that participating in GVCs/GPNs, could be an effective fast-track strategy for developing countries to enhance their competitiveness, however, simply plugging into the GVCs/GPNs was not enough. Panelists observed that while the East Asian countries have adopted various pathways in their efforts to improve supply-side capabilities and to successfully compete within the GVCs and GPNs, several common policy elements underline their success stories. These include macroeconomic stability, allocation of resources based on dynamic comparative advantage, rapid accumulation of physical and human capital, agricultural development and competent bureaucracy and institutions, improving the drivers of competitiveness, including through domestic technology effort and access to foreign technologies through FDI and licensing, as well as the building of infrastructure and skills, and fostering the establishment of intermediary institutions for supporting innovation and learning efforts of firms.

Panelists addressed the critical issue of the governance of value chains and noted that poorer developing countries and low technology export sectors are caught between, on the one hand, concentrated VC buyers, who seek the lowest global production sites, forcing prices down and production capabilities up, so as to cut prices further, and on the other hand, increasing competition from a growing number of developing country producers driven by accelerating Chinese capability to compete at the margin. Participants identified a number of upgrading strategies developing countries could adopt, including, inter alia, avoiding entering into VCs and sectors where price is the only or main competitive criteria; upgrading to meet value chain protocols and standards; upgrading production processes and operational performances; finding higher value added product markets to enter, and moving into more knowledge intensive functions such as design, logistics, branding and marketing.

Drawing on findings of recent field studies on the evolution of Brazilian and Latin American firms linked to GVCs, panelists observed that in order for countries to promote industrial upgrading and avoid downgrading, it is imperative that policy makers understand how and why existing GVCs structure and function the way they are, and under what conditions and in what ways these chains will change over time. They must also address the key issue of the balance between local governance, which is influenced by industrial policy as well as regional policy, and global governance, which is influenced by the formation and functioning of the GVCs. Panelists called for greater policy attention in this regard.

One panelist presented a recent study, which mapped the electronics GPNs in East Asia and Latin America, and compared them to automotive GPNs in both regions, with a view to assessing policies and prospects. It was observed that both industries are scale-intensive with advanced technologies, dominated by oligopolistic firms with strong international presence and global brands. Both have processes conducive to fragmentation; however, the auto industry, which is more mature and longer established internationally, is less fragmented than electronics, which is spreading rapidly in developing countries despite rapid technical change.

It was observed that while fragmentation concentrates in East Asia and Latin America largely due to location, wages, skills, trade and FDI policies and infrastructure, industrial policy has also played a key role. East Asian countries outperformed Latin American ones in electronics industry, even to serve US markets, partly due to their strategies to build local capabilities, as well as targeted FDI strategies, and partly because they were in the right place at the right time. They subsequently developed strong first-mover advantages, which had been further

strengthened as GPNs became regional. The recent development in China illustrates that newcomers can still enter, provided that they offer advantages that fit into existing networks.

In the auto industry, GPNs are more advanced in Latin America due to logistic factors and trade agreements. Its lead in auto fragmentation does not lead to rapid export growth as the case of East Asia.

Liberalization, skill formation, infrastructure improvement and competitive pressures on MNCs should lead to the further spread of GPNs to developing countries, as witnessed recently in the auto industry in South Africa, Turkey and India, however, there are few signs of major new electronics GPN sites in other regions. This may reflect the cumulative capability and agglomeration advantages of incumbents; it may also show that other regions cannot meet the current capability needs of global electronics production. Countries with advanced skills, established industrial capabilities and sophisticated infrastructure are likely to benefit from another burst of fragmentation that reaches other regions.

Panel 2: **Technology Trends: Foresight Results,** 16 June 2004

Panelists included Mr. Henning Banthien, IFOK Institute, Germany, Mr. Karel Klusacek, Technology Centre, Czech Republic, Mr. Carlos Cristo, Ministry of Development Industry and Trade, Brazil, Mr. Ricardo Seidl da Fonseca, UNIDO, and Mr. Lelio Fellows, CGEE, Brazil. The Panel was chaired by Mr. Roberto Jaguaribe, Ministry for Development, Industry and Trade, Brazil, and moderated by Mr. Herbert Kroell, Austrian Foreign Ministry.

Technology foresight is essentially based on analysis of current trends and future expectations with the purpose of identifying technologies that could generate economic and social benefits. While most policies of developing countries in the past have been designed to respond to consequences of technological changes, foresight allows countries to anticipate where the technological frontiers might be and develop policies to take advantage of emerging technologies. Technology foresight is critical in the formulation of relevant policies that promote technological innovation and application, strategies for funding and implementation as well as the planning and decision-making in different sectors of the economy.

Panelists presented experiences with technology foresight in Germany, Central and Eastern Europe, and Brazil, with a view to sharing good practice examples and lessons learned.

Participants emphasized that foresight exercises should not be simply technology-driven; they should focus on understanding future needs of the society and economy, and identify technologies that are likely to meet those needs. The usefulness of foresight depends on the identification and involvement of a wide range of experts and stakeholders from various sectors and disciplines from the very outset, the setting of practical goals and regular communication and dialogue with the stakeholders throughout the process. By bringing together representatives from industry, academia and public sectors, foresight also presents a valuable opportunity to understand the full innovation system of a country.

Participants underscored the importance of public-private partnership. CGEE is a public, non-governmental organization of Brazil, which was was created in 2001, as an outcome of the national conference on science and technology, to undertake foresight activities in partnership with the private sectors. CGEE's main strategies in technology foresight include: develop and adapt technology foresight methods, aiming at

the private sector and the academia; develop and adapt evaluation methods to measure the economic, social and environmental impacts of the S&T policies, programmes and projects; contribute to the consolidation of national S&T networks dealing with technology foresight and impact evaluation; actively participate in national and international networks for technology foresight and impact evaluation; promote strategic studies related to technological innovation and create mechanisms to inform the society about S&T to increase their awareness.

One participant addressed the importance of building up regional foresight networks, and presented UNIDO's efforts in this regard in Central and Eastern Europe and Latin America. UNIDO worked with policy makers, companies, R&D institutions, as well as the general public. Special efforts were made to sensitize policy-makers, with a view to fostering a culture of foresight among the future generations of decision and policy makers. UNIDO also assisted with the creation of national and sub-regional centres of excellence on foresight process, preparation of a roster of regional and international experts on foresight and relevant areas of knowledge. Various training activities were provided for foresight practitioners, and case studies were carried out to demonstrate the applicability of foresight approaches and their added value for the development of national and regional policies related to common issues or themes.

Panel 3: **Technology Parks: the future in developing countries,** 17 June 2004

Panelists included Mr. Mustafa Atilla, Ankara Cyberpark at Bilkent University, Turkey, Nalin Kohli, Terabyte Informatics Pvt.Ltd., India, Sergio Risola, CIETEC, Brazil, and Claudio Marinho, Government of Pernambuco, Brazil. The Panel was chaired by Reinaldo Dias Ferraz de Souza, Ministry for Science and Technology, Brazil, and moderated by Jose Luis Fiates, Anprotec, Brazil.

Technology parks have played an important role in the creation of business ventures that focus on technology commercialization and diffusion. They have contributed to recent innovation and technological advances in such fields as ICTs, biotechnology, electronics, nano-technologies, transportation, health, energy and the environment. Technology parks provide space and opportunities for start-up firms and R&D units of established firms. Often located in close proximity to university and research facilities, they facilitate technology transfer operations, allow the incubation of spin-off enterprises by university staff, and promote the flow of knowledge and technology between academia and business.

Panelists shared their experiences with technology parks in Brazil, India and Turkey. They emphasized the crucial role of regulatory, legal and administrative policies on the success of technology parks. Important policy tools include taxation, legal and political framework that helps to create a conducive environment that promotes innovation and commercialization of technologies. The Turkish Government, for example, developed in 2001, a "Technology Development Zones Law", which provides tax exemptions and incentives for the income generated from software development and R&D activities of the companies, salaries of the researchers, software development staff and R&D personnel located in the technology development zones. In addition, the Law grants the right to recruit individuals from government research organizations and universities, and the income obtained in the zone by academicians or research personnel are exempt form the university revolving fund deductions. It also permits academicians to establish firms or to become a partner of existing firms in the zones to commercialize their academic work.

Participants noted the difficulties of technology commercialization. In this context, they addressed the important issue of instilling an intellectual property rights (IPR) regime, the aim of which is to encourage knowledge creation and innovation. IPR grants the creators of knowledge income earning opportunities so that they may recoup the cost of knowledge generation and be rewarded for their innovation. However, since knowledge is input for further innovation, having a too restrictive IPR regime, whilst increasing rewards for innovation, stifles innovation as the cost of undertaking innovative activities becomes too high. Thus, what is necessary is to strike a balance between the need for providing incentives for innovators on one hand and the need for others to take advantage of the newly created knowledge to facilitate further development on the other.

Panelists observed that the difficulty to mobilize funds is a major challenge faced by technology parks in many developing countries. Even when encouraging results are obtained from research, the developmental stages of getting the product to market are extremely expensive. In the absence of local financing sources, such as venture capital and bank loans, scientists have collaborated with developed country firms or TNCs as in the case of India. The private sector in developed countries, especially TNCs, has not only the resources but also the expertise in management and commercialization.

Panel 4: **Future of Innovative Enterprises: local or global markets,** 18 June 2004

Panelists included Mr. Fernando Reinach, Votorantin Novos Negocios, Brazil and Mr. Jean-Marie Leclerc, Centre des Technologies de l'Information, Republique et Canton de Geneve, Switzerland. The Panel was chaired by Mr. Odilon do Canto, FINEP, Brazil, and moderated by Mr. Mongi Hamdi, UNCTAD

Panelists underlined the importance of enterprise creation and technical innovation to sustainable economic growth, and noted that vigorous enterprise creation depended on a nation's entrepreneurial culture and the ease with which businesses could be started and financed. Furthermore, in order for enterprises to take the "high road" of competition in the global value chain of production, they need to continuously enhance their capabilities, which enable them to add value to existing activities and make new products and start new services that are competitive in the global economy. However, enterprise in developing countries often face difficulties accessing finance, information, technology and markets. Panelists discussed specific policies, programmes and appropriate institutional frameworks which are needed to help them, including financing mechanisms as well as measures to build up research-industry partnerships at both national and international levels.

Panelists addressed the critical role of banks and financial institutions in fostering technological innovation. Financing Agency for Studies and Projects (FINEP) of Brazil, a public corporation connected with the Ministry of Science and Technology, is responsible for the development and funding of research and development activities in enterprises and science and technology institutions. Created initially to finance the activities of consulting firms on feasibility studies for engineering projects that required government support, FINEP is now also the executive secretariat of the National Fund of Scientific and Technological Development (FNDCT), an instrument for financing scientific and technological activities in Brazil. FINEP continues to provide loans to feasibility studies and technological projects in the business sector. It holds business rounds

between companies and investors and helps create support instruments for emerging companies in their capitalization process and going public. In addition, by working with private enterprises and university, and research institutes, FINEP functions as a critical interface between knowledge creation institutions and enterprises where knowledge is turned into good and services and facilitate the interactions between these institutions, which facilitate the generation of new ideas and stimulate innovation.

Finance has been identified as one of the most important factors determining the survival and growth of enterprises. Panelists noted that Governments should facilitate the creation of an active venture capital market by prospecting, encouraging and supporting business structuring, especially technology-based companies. In the field of biotechnology, Brazil is one of the top ranked countries in the world in its production of new knowledge and scientific publication, however, not all this knowledge is turned into products and services. Panelists listened to presentations from Votorantin Ventures and Valle, two venture capital firms that finance companies in biotechnology, an area of strategic importance to agricultural and health industries.

Panelists highlighted the importance of an IPR regime to stimulating innovation, and underscored the importance of enforcement. However, they also observed that the current IPR regime favours the private interests of innovators too strongly at the expense of the benefits for humanity, especially in the global campaign for affordable medicines. One panelists observed that developing countries should be given more flexibility with regard to pharmaceutical patenting. Panelists also addressed the issues of biodiversity and traditional knowledge. Traditional knowledge, which is by nature adapted to local needs, can contribute to a viable and environmentally sustainable path to economic development. Many activities and products based on traditional knowledge are important sources of income, food, and healthcare for large parts of the populations in many developing countries. It is therefore important for industrial policies to encourage innovation and commercialization based on traditional knowledge, and explore mechanisms to harness it for industrial development especially in agricultural and pharmaceutical industries.

ANNEX I. MEDIA COVERAGE

Articles on the 2004 Technology Fair of the Future and UNIDO Director-General Interviews held at the Fair, published until 2004-06-17

Technology Fair of the Future 2004
From June 14 to 18, the Technology Fair of the Future will gather representatives of innovative companies, the government and leading entrepreneurs from different countries involved in developing new technologies in the capital of São Paulo.
Technology Fair of the Future 2004
FAPESP Agency - SP - Pg. Online - 2004-05-28

Technology Fair of the Future starts on Sunday
The first edition of the Brazilian Technology Fair of the Future starts this Sunday, June 13, organized by the United Nations Industrial Development Organization (UNIDO), the UN agency dedicated to sustainable industrial development.
Technology Fair of the Future starts on Sunday
Info Exame On Line - SP (Plantão info/Internet) - Pg. Online - 2004-06-09

Technology Fair of the Future starts on Sunday
The first edition of the Brazilian Technology Fair of the Future will start this Sunday, organized by the United Nations Industrial Development *Organization (UNIDO), the UN agency dedicated to* sustainable industrial development.
Technology Fair of the Future starts on Sunday
o - UOL Notícias - SP (*Últimas Notícias* – Latest News) - Pg. Online - 2004-06-09

UN agency debates on emerging technologies held in SP
UNIDO (United Nations Industrial Development Organization), a UN agency dedicated to sustainable industrial development has organized a Technology for the Future Fair for the first time in Brazil—20th edition
UN agency debated emerging technologies in SP
Canal Executivo / Executive Channel / E - SP - Pg. Online - 2004-06-11

***São Paulo hosts the Technology Fair* for the Future 2004**
The United Nations Industrial Development Organization (UNIDO) and the UN Conference on Trade and Development (UNCTAD) organized the Technology Fair for the Future will be held in São Paulo from June 14 through 18, gathering representatives from innovative companies, entrepreneurial leaders and the Government from different countries closely linked to the development of new technologies.
São Paulo hosts the Technology Fair for the Future 2004
Jornal Global - PE - Pg. Online - 2004-06-11

São Paulo hosts Technology Fair *for the Future 2004*
The United National Industrial Development Organization (UNIDO) and the United Nations Conference for Trade and Development (UNCATD) have jointly organized the Technology Fair for the Future 2004, to be held in São Paulo from June 14 to 18, with the attendance of representatives of innovative companies, business leaders and Government representatives from different countries developing new technologies.
São Paulo hosts Technology Fair for the Future 2004
Jornal Digital - PE (Notícias) - Pg. Online - 2004-06-11

UNIDO discusses emerging technologies
The event promoted by the UN agency will be held in São Paulo with participants from all continents. The Technology Fair for the Future will *gather next week in São Paulo representatives* from 192 countries to discuss matters related to energy, biotechnology, nanotechnology, information and communication technology, and airspace technology.
Unido discusses emerging technologies
ITWeb - SP - Pg. Online - 2004-06-11

UNCTAD will bring technologies for the future
The XI UNCTAD to be held in São Paulo from June 13 to 18 will host the Technology Fair for the Future that will gather companies, governments and business people from several countries.
UNCTAD will bring technologies for the future
Gazeta Mercantil - SP (1st Supplement) - Pg. A 8 - 2004-06-11

Agenda
The United Nations Industrial Development Organization (UNIDO) will promote the Technologies Fair for the Future this Sunday (June 13) and on Friday (June 18) that will gather representatives from 192 closely linked to a large variety of sectors.
Emerging Technologies
Gazeta Mercantil - SP (1st Supplement) - Pg. A 2 - 2004-06-11

Names and Notes
Kemel, a company belonging to the COPPE/UFRJ incubator was chosen to participate in the Technology Fair for the Future promoted by the United Nations Industrial Development Organization (UNIDO).
Emerging Technologies
Gazeta Mercantil - SP (1st Supplement) - Pg. A 2 - 2004-06-11

UNCTAD Meeting
A Trade Agreement is not enough The UNIDO Director-General considers that poorer countries have more obstacles to overcome. "Trade opening is greatly over-estimated", said the Director-General of the United National Industrial Development Organization (UNIDO), Argentine-born Carlos Magariños.
"A trade agreement is not enough"
O Estado de S. Paulo - SP (Economia) - Pg. B 5 - 2004-06-12

Nanotechnology and biotechnology will be present during the event
One of the parallel event of the XI UNCTAD Meeting will be dedicated to advanced technology. One hundred and fifty companies from 25 countries will present solutions in the areas of nanotechnology and new materials, biotechnology, communication and information technology, airspace and energy during the Technology Fair for the Future 2004, organized by the United Nations Industrial Development Organization (UNIDO), being inaugurated today at the Anhembi Convention Center.
Nanotechnology and biotechnology will be present during the event
O Estado de S. Paulo - SP (Economia) - Pg. B 5 - 2004-06-13

Carlos Magariños
"We lack competition and anti-trust policies" São Paulo. The definition of a sustainable industrial policy is essential in order to allow all developing countries to have a position of strength over global trade, which is today dominated by transnational companies. This is the opinion expressed by the president of UNIDO, the UN Industrial Development Organization that is promoting the Fair of Technologies for the Future for the first time in Brazil.
Corpo a Corpo
O Globo - RJ (Economia) - Pg. 43 - 2004-06-13

According to the UN, investments in Latin America drop 55 per cent
Carlos Magariños, Director-General of the United Nations Industrial Development Organization—UNIDO believes that improving the educational system in developing countries, particularly in Latin America, is more important than caring about growth indexes.
Investments in Latin America Latina dropped 55 per cent, according to the UN - Folha de S. Paulo - SP (Dinheiro) - Pg. Capa/B 1 - 2004-06-14

UNIDO discusses emerging technologies
Event promoted by a UN Organization will be held in São Paulo with participants from all continents. During the Technology Fair for the Future 2004 to be held in São Paulo next week, representatives from 192 countries to discuss matters related to energy, biotechnology, nanotechnology and materials, information and communication technology, and airspace technology.
UNIDO discusses emerging technologies
Information Week - Online - SP - Pg. Online - 2004-06-14

A Fair parallel to the UNCTAD shows alternatives for Brazil to export high-technology products
"We are proud of some high-technology products we are exporting, such as the Embraer planes and telecommunication devices. Unfortunately, they are still very few. The Fair aims to make these few examples multiply", said Ricupero during the opening session of the Technology Fair for the Future, an event held in parallel to the United Nations Conference on Trade and Development—UNCTAD XI.
Fair held in parallel to the UNCTAD shows alternatives for Brazil to export high-technology products.
Agência Brasil - DF (Brasil Agora) - Pg. Online - 2004-06-14

Surplus resources available for technology
Side by side to Ricupero, the Secretary-General of the United Nations Industrial Development Organization—UNIDO, Carlos Magariños inaugurated yesterday the Technology Fair for the Future 2004 at the Anhembi Convention Center.
Surplus resources available for technology
O Globo - RJ (Economia) - Pg. 19 - 2004-06-14

Fair aims to drive technology exports
We are proud of some high-tech products we exports, such as the Embraer planes and telecommunication devices. Unfortunately, they are still

very few. The Fair aims to make these few examples multiply", said Ricupero during the opening session of the Technology Fair for the Future, an event held in parallel to the United Nations Conference on Trade and Development.
Fair aims to drive forward technology exports
Folha de Londrina - PR (Economia) - Pg. 05 - 2004-06-14

Fair presents emerging technologies during the UNCTAD 2004
One of the events to be held at the XI General Conference of the UNCTAD by the United Nations Industrial Development Organization—UNIDO, will gather next Friday (June 18) 192 countries at the Anhembi Convention Center in SP, interested in areas such as energy, biotechnology, nanotechnology and materials, information and communications technology and airspace technology.
Fair presents emerging technologies during UNCTAD 2004
Computerworld Diário - SP (Negócios) - Pg. Online - 2004-06-15

Fair shows emerging technologies during the UNCTAD event
One of the events to be held at the XI General Conference of the UNCTAD by the United Nations Industrial Development Organization—UNIDO, will gather 192 countries at the Anhembi Convention Center next Friday (June 18), interested in areas such as energy, biotechnology, nanotechnology and materials, information and communications technology and airspace technology.
Fair shows emerging technologies during UNCTAD
IDG Now - SP - Pg. Online - 2004-06-15

UNIDO promotes event
The UN agency United Nations Industrial Development Organization—UNIDO has organized the Technology Fair for the Future 2004 that will be held at the Anhembi Convention Center Exhibition Hall in São Paulo from June 13 through 18).
UNIDO promotes event
Developers.com - RJ - Pg. Online - 2004-06-15

Technology Fair for the Future 2004
The event—promoted by UNIDO (United Nations Industrial Development Organization), an agency of the United Nations Organizations—is one of the parallel event to be held during the XI General Conference of the UNCTAD that will gather representatives from 192 countries linked to the sectors of energy, biotechnology, nanotechnology and materials, and information, communication and airspace technology.
Technology Fair for the Future 2004
Developers.com - RJ - Pg. Online - 2004-06-15

Magariños (photo) from UNIDO, promotes Technology Fair during the UNCTAD
A software fighting crime using artificial intelligence, games that simulate the behavior and attitudes of real people, a bio-oil extracted from sugar cane bagasse waste to substitute diesel: all of this seems to belong to the world of science-fiction but isn't. These are existing technologies developed in Brazil, that are being presented during the Technology Fair for the Future 2004 to be held in São Paulo as a parallel event to the XI United Nations Conference on Trade and Development (UNCTAD).
Magariños (photo), from UNIDO, promotes technology fair during the Unctad
Valor Econômico - SP (Empresas/Tecnologia and Telecomunicações) - Pg. B1/B3 - 2004-06-16

IT present at the UNCTAD
A United Nations conference to be held this week in the capital of São Paulo will use WiFi Technology for its infrastructure and will also host the lecture on the Brazilian case on innovation technology.

Information technology will also be present during the XI United Nations Conference on Trade and Development (UNCTAD) to be held on June 18th in São Paulo.

A large variety of innovative solutions will be presented at the Digital Port Management Core, an initiative aiming to turn the old part of Recife into one of the best places in the world for entrepreneurial activities under the framework of the new economy, and the best one in Latin America.
IT present at the UNCTAD
Information Week - Online - SP - pg. Online - 15/06/2004

ANNEX II. Figures on countries and sectors covered

No.	Countries	Catalogue	Participants	Exhibitors	Energy	ICT	Biotech	Nanotech	Materials	Electronics	Automation	Aerospace	Health	Clean Tech	Agrofood	R&D	Promotion
	Developed Countries																
1	Austria	4	1	1										1			
2	Canada	1															
3	France	1	1	1													1
4	Germany	1	1	1												1	
5	Italy	1															
6	Japan	1	1	1													1
7	USA	1						1									
	Sub-total	***10***	***4***	***4***	***0***	***0***	***0***	***1***	***0***	***0***	***0***	***0***	***0***	***1***	***0***	***1***	***2***
	Developing Countries																
8	Argentina	2	1	1							1						
9	Brazil	67	46	35	5	18	6		5			3	2	1	1	2	3
10	Cameroon	1															
11	Chile	1															
12	China	10	10	10	2	2				2		1					3
13	Colombia	4	1													1	
14	Ethiopia	1															
15	India	11	11	10	1	8			1		1						
16	Mexico	2															
17	Morocco	1															
18	Senegal	1															
19	Sri Lanka	1															
21	Tanzania	1															
22	Turkey	5	4	4		4											
23	Uruguay		1	1												1	
	Sub-total	***108***	***74***	***61***	***8***	***32***	***6***	***0***	***6***	***2***	***2***	***4***	***2***	***1***	***1***	***4***	***6***
	Countries in Transition																
24	Czech Rep.	12	12	12	3	1	2	1							4		1
25	Romania	1	1			1											
26	Russia	5	2	2										1		1	
27	Ukraine	2	1	1								1					
	Sub-total	***20***	***16***	***15***	***3***	***2***	***2***	***1***	***0***	***0***	***0***	***1***	***0***	***1***	***4***	***1***	***1***
	International organizations																
28	Int.org.	2	3	3			1							1			1
	Sub-total	***2***	***3***	***3***			***1***							***1***			***1***
	Total	**140**	**97**	**83**	**11**	**34**	**9**	**2**	**6**	**2**	**2**	**5**	**2**	**4**	**5**	**6**	**10**

No.	ID	COMPANY NAME	COUNTRY	SECTOR	TYPE	PARTICIPATION					
						Exhibition	*Oral Presentation*	*Video (Multimedia)*	*Video Conference*	*Catalogue*	*Represented*
1	9	EMBRIA TECHNOLOGIES	Brazil	Information and Communications Technology	company		x				
2	11	E-Biz Solution- Consultoria e Soluçiones Tecnológica Ltda	Brazil	Information and Communications Technology	company	x	x				
3	15	Multilateral Investment Garantee Agency	International	Multisector	Investment and promotion	x					
4	16	Aerospace Technology Centre	Brazil	Aerospace	Technology promotion		x				
5	21	Centro de Investigaciones y Desarrollo Científico	Colombia	Agro-food processing	Research and development		x				
6	22	DMX	Brazil	Information and Communications Technology	company			x			
7	23	Research and Breeding Institute of Pomology Ltd.	Czech Republic	Biotechnology	company	x					x
8	24	Moravia Letovice	Czech Republic	Energy/Renewable energy	company	x					
9	26	AMR AMARATH a.s.	Czech Republic	Agro-food processing	company	x					
10	28	Universidade Federal do Rio Grande do Sul	Brazil	Multisector	Research and higher education	x					
11	31	Technology Centre AS CR	Czech Republic	Multisector	Technology promotion	x					
12	32a	Shenzhen International Technology Promotion Center for Sustainable Development (ITPC)	China	Renewable energy	Technology promotion	x					
13	32b	Shenzhen Energy Environment Engineering Co.,Ltd. (SEEE)	China	Energy	Technology promotion	x		x			

ANNEX III. List of Participants *(continued)*

No.	ID	COMPANY NAME	COUNTRY	SECTOR	TYPE	PARTICIPATION					
						Exhibition	Oral Presentation	Video (Multimedia)	Video Conference	Catalogue	Represented
14	33	UNIDO ITPO-China	China	Multisector	Technology promotion	x					
15	35	NovoFilme Energy Systems Components	Brazil	Energy/Renewable energy	company	x					
16	36	BIOWARE Tecnologia	Brazil	Energy/Renewable energy	company	x					
17	37	Griaule Technology	Brazil	Information and Communications Technology	company	x					
18	38	ELZACO Ltd.	Czech Republic	Energy/Renewable energy	company	x	x				
19	39	Scylla Bioinformatics	Brazil	Information and Communications Technology	company	x					
20	40	Mavel, a.s.	Czech Republic	Energy/Renewable energy	company	x					x
21	41	Research Institute of Brewing and Malting Plc. (Vyzkumny ustav pivovarsky a sladarsky , a.s.)	Czech Republic	Biotechnology	Research and development	x					
22	42	ABLEVISION SISTEMAS COMPUTACIONAIS LTDA.	Brazil	Information and Communications Technology	company	x	x				
23	43	Food Research Institute Prague	*Czech Republic*	*Agro-food processing*	Research and development	x					
24	44	Area Quimica Ltda	Brazil	Materials	company		x				
25	47	INTERNATIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY (ICGEB)	International	Biotechnology	Research and development	x	x	x			
26	50	*BUG Agentes Biológicos*	Brazil	Biotechnology	company	x					
27	51	SYNPO, Inc.	Czech Republic	Nanotechnology/polymer chemistry	company	x					x

ANNEX III. List of Participants *(continued)*

No.	ID	COMPANY NAME	COUNTRY	SECTOR	TYPE	PARTICIPATION				
						Exhibition	Oral Presentation	Video (Multimedia)	Video Conference	Catalogue	Represented
28	53	Adespec Adesivos Especiais Ind. Com. Imp. Exp. Ltda	Brazil	Building materials/Special adhesives and sealants	company	x					
29	56	WEG INDÚSTRIAS SA - QUÍMICA	Brazil	Industrial paints & coatings	company	x			x		
30		Secrator Vepa	India	Energy	Technology promotion		x				
31	61	Svoboda a syn, s.r.o.	Czech Republic	Communications Technology, Building	company	x					
32	62	Biolab Sanus Farmacêutica Ltda	Brazil	Biotechnology/Medicine	company	x					
33	64	GREEN TECHNOLGOIES - PROJETOS AGROINDUS-TRIAIS S/C LTDA.	Brazil	Agro-food processing	company	x					
34	65	Soyminas Biodiesel Derivados de Vegetais Ltda	Brazil	Energy/Renewable energy	company	x					
35	67	Instituto de Pesquisas Energeticas e Nucleraes - IPEN	Brazil	Renewable energy/Biotechnology/ Agro-food processing	Research and development	x					
36	70	EMBRACO - Empresa Brasileira de Compressores SA	Brazil	Refrigeration Industrial	company	x			x		
37	71	Motor Sich JSC	Ukraine	Aircraft engines and gas turbine drives	company	x					
38	72	Fotônica Tecnologia Óptica Ltda	Brazil	Information and Communications Technology	company	x					

ANNEX III. List of Participants *(continued)*

No.	ID	COMPANY NAME	COUNTRY	SECTOR	TYPE	PARTICIPATION					
						Exhibition	Oral Presentation	Video (Multimedia)	Video Conference	Catalogue	Represented
39	73	Itautec-Philco S/A - Grupo Itautec-Philco	Brazil	Information and Communications Technology	company	x		x			
40	74	Instituto de Pesquisas Tecnológicas - IPT	Brazil	Environment and energy	Research and development	x	x	x			
41	77	Cristalia Produtos Quimicos e Farmacêuticos Ltda	Brazil	Pharmaceuticals	company			x			
42	78	Sociedade do Sol	Brazil	Energy/Renewable energy	ngo	x					
43	79	Focus Tecnologia Ltda	Brazil	Information and Communications Technology	company	x					
44	80	Brazsat Commercial Space Services Ltda.	Brazil	Information and Communications Technology	company	x					
45	81	Compuletra Ltda	Brazil	Information and Communications Technology	company	x	x				
46	82	JETRO, SÃO PAULO	Japan	Multisector	Trade/investment/ Technology Transfer	x		x			
47	84	Tecnologias Associadas & Franchising Ltda.EPP	Brazil	Biotechnology	company	x					
48	85	German-Brazilian Institute of Technology (ITBA)	Brazil	Multisector	Research and development	x		x	x		
49	86	Ambassy of France in Brasil	France	Multisector	Technology promotion	x					
50	90	FANEM LTDA.	Brazil	Medical Equipments	company	x					
51	92	Beijing Air Traffic Control Engineering and Technology Co., Ltd	China	Aerospace	company	x					

ANNEX III. List of Participants *(continued)*

No.	ID	COMPANY NAME	COUNTRY	SECTOR	TYPE	PARTICIPATION				
						Exhibition	Oral Presentation	Video (Multimedia)	Video Conference	Catalogue	Represented
52	97	3GEO COLLET E ARAUJO LTDA	Brazil	Cleaner technology	company		x				
53	102	*Tauá Biomática S/A*	Brazil	Information and Communications Technology	company	x					
54	106	Uniprest Ltda	Brazil	Software for steel construction- development	company		x	x			
55	107	Ivoxcorp	Brazil	Information and Communications Technology	company		x				
56	109	Confirm Soluções em Sistemas e Documentos Digitalizados Ltda.	Brazil	Information and Communications Technology	company		x				
57	118	Fundação Centros de Referência em *Tecnologias Inovadoras* (CERTI)	Brazil	Multisector	R&D - Technology Development	x					
58	119	The Brazilian Agricultural Research Corporation - Embrapa	Brazil	Biotechnology/Agronomy	Research and development	x	x		x		
59	120	VALETEC - Associação de Desenvolvimento Tecnológico do Vale	Brazil	Multisector	Technology Promotion	x					
60	123	Progress Industry, s.r.o.	Czech Republic	Agro-food processing/Design & Development	company	x					
61	126	NORTEC QUÍMICA S.A.	Brazil	Pharmaceutics	company	x					
62	127	Orbisat Remote Sensing	Brazil	Information and Communications Technology	company	x					
63	129	AUTOMACION MICROME-CANICA S.A.I.C.	Argentina	Industrial Automation	company	x					

ANNEX III. List of Participants *(continued)*

No.	ID	COMPANY NAME	COUNTRY	SECTOR	TYPE	PARTICIPATION					
						Exhibition	Oral Presentation	Video (Multimedia)	Video Conference	Catalogue	Represented
64	131	CECIC Blue-Sky Investment Consulting & Management Co., Ltd.	China	Energy/Renewable energy	Technology promotion	x					
65	140	ICS-UNIDO	International	Multisector	Technology Transfer	x	x	x			
66	143	Cietec - Centro Incubador de Empresas Tecnológicas	Brazil	Multisector	Technology Park	x					
67	145	MANN INDIA TECHNOLOGIES PVT.LTD.	India	Information and Communications Technology	company	x					
68	146	SUPER INFOSOFT PVT. LTD.	India	Information and Communications Technology	company	x					
69	147	MATRIX INFOSYSTEMS LTD.	India	Information and Communications Technology	company	x					
70	148	Electronics and Computer Software Export Promotion Council	India	Information and Communications Technology	Technology promotion	x					
71	149	International Centre for Advancement of Manufacturing Technology (ICAMT)	India	Advanced manufacturing technology	Technology Promotion	x					
72	150	Building Material and Technology Promotion Council	India	Building materials	Technology Promotion	x		x			
73	151	Central Manufacturing Technology Institute	India	Information and Communications Technology	Technology Promotion	x					
74	152	CELETRON INDIA LTD.	India	Information and Communications Technology	company	x					
75	153	PROLOGIC FIRST INDIA PVT LTD	India	Information and Communications Technology	company	x					

No.	ID	COMPANY NAME	COUNTRY	SECTOR	TYPE	PARTICIPATION					
						Exhibition	Oral Presentation	Video (Multimedia)	Video Conference	Catalogue	Represented
76	154	KG Information Systems Private Limited	India	Information and Communications Technology	company	x					
77	155	Axetel	Romania	Information and Communications Technology	company		x				
78	156	Porto Digital	Brazil	Information and Communications Technology	*Technology Park*	x	x				
79	160	Kemel	Brazil	Information and Communications Technology	company		x				
80	163	Centro para a Competitividade e Inovação do Cone Leste Paulista	Brazil	*Aerospace*	Technology promotion	x					
81	164	VÚC Praha, a.s.	Czech Republic	Agro-food processing/Waste water cleaning	company	x					
82	168	Leme Informática S.A.	Brazil	Information and Communications Technology	company		x				
83	174	APPI Tecnologia S/A	Brazil	Information and Communications Technology	company		x				
84	178	Cyberpark Inc.	Turkey	Information and Communications Technology	Technology Park	x					
85	179	Meteksan System Inc.	Turkey	Information and Communications Technology	company	x					x
86	180	Tepe Technology Inc.	Turkey	Information and Communications Technology	company	x					x
87	181	Mobilsoft Mobile Information and Communication Technologies Inc.	Turkey	Information and Communications Technology	company	x					

ANNEX III. List of Participants *(continued)*

No.	ID	COMPANY NAME	COUNTRY	SECTOR	TYPE	PARTICIPATION					
						Exhibition	Oral Presentation	Video (Multimedia)	Video Conference	Catalogue	Represented
88	182	EXCEGEN GENETICA SA	Brazil	Biotechnology	company	x					
89	183	EMBRAER	Brazil	Aerospace	company	x		x			
90		NorthWest ICPC	Russia	Environment	Technology promotion	x					
91	188	AVL South America Ltda	Austria	Consulting/Automotiv/ Environment	company	x					
92	190	LATU	Uruguay	Multisector	Research and development	x					
93	191	The 28th Research Institute of China Electronic Technology Group	China	Electronics	Research and development	x					
94	192	Wuhan Zhonglian New Energy Co., Ltd	China	Energy/Renowable energy	company	x	x				
95	193	Fujian Furi Electronics Co., Ltd.	China	Electronics	company	x					
96	194	Mindong Electric Group, International Trading Co.,Ltd.	China	Information and Communications Technology	company	x					
97		VNII Geophysics	Russia	Nanotechnology	Research and development	x