

**Project for the Combination of a Regional Distance Learning  
Center with a Digital Library  
(On-line Access to scientific and technical information service)**

Prof. Brahim Bessaïs, Head of the Information and Documentation Unit  
Borj-Cédria Science & Technology Park, Tunisia

Prof. Abdennaceur Karoui, Associate Director of Nanoscience and  
Nanotechnology  
Research Center, Shaw University, USA

One of the major problems that the scientific world has been experiencing in the past years is the chronic brain-drain from the developing and transition countries towards the more developed ones. One of the main reasons for this movement is the difficulties facing students and researchers in developing and emerging countries in reaching scientific and technological information and to continue their studies or research activities in their home country. This may be explained as being due to a lack of distance learning centers including modern digital libraries. New information and communication technologies are the main keys that today permit to set-up distance learning centers and digital libraries. Multimedia technology is a new exciting field with many applications that are growing rapidly. Among them those related to educational programs are taking place with a variety of forms which are used for a new way of presenting the content of dictionaries, textbooks, scientific papers, research activities etc. where words are used together with sounds, images, video clips, in order to attract the interest of the "reader".

A digital library program is considered innovative if it provides access to information technology and services that were previously unavailable to the community. For developing countries, basic Internet access and training may be considered innovative given the countries' stage of development.

In Borj-Cédria Science and Technology Park, we are setting up a Central Library, by promoting the **Information and Documentation Unit affiliated to Borj-Cedria Science & Technology Park**. It will provide scientists, engineers, and students with all necessary information to perform their research and educational work and contribute to the advancement of science and technology. The library will collect and disseminate information at the national level. The library will also enable sharing and disseminating needed information by giving access to scientific and technological information through various electronic networks and international data bases.

To do that, it will:

- Provide up-to-date scientific and technological information,
- Contribute to the synergy and integration of all Technopark components,
- Provide an access point to other Libraries and resource data,
- Archive all the Technopark output in adequate formats (hard copies, digital, microfilms, etc.).

**Bessaïis Paper submitted for the Digital Library for the Maghreb Workshop**  
Held in Rabat, Morocco, January 25-27, 2007

The core of this project has been started, promoted by the Information and Documentation Unit. It is hoped that the Information and Documentation Unit will evolve in the near future to a Central Library of the Technopark. The Central Library is sought to be the documentary source for all components of Borj-Cedria Technopark, other technoparks, universities, and industry.

This current project could be supported if we provide to our broad public a combined Digital Library (On-line Access to scientific and technical information) and Distance Learning service. The latter will offer remote teaching through video conferencing.

The goals would be:

- complement the existing online access to technical documents and databases,
- provide technology based tele-conference infrastructure for distance learning,
- create a learning dynamic that will attract the public to new areas of learning, and
- expand, in a second stage, to reach out the boundary of the country and beyond.

Our Technopark wishes to contribute to the excellent effort of international cooperation supported by our government. Therefore, it would be smart to think of extending this cooperation by expanding the function of the proposed Distance Learning service and Digital library (On-line Access to scientific and technical information), so that it wins a regional dimension. For instance, using the infra structure of the Distance Learning, students from Mali or Libya can attend lectures on technologies of regional interest, such as renewable energies (one of the strongest drives of Borj Cedria Technopark). Also, we can for example run experiments in our Labs for students for instance in Algeria, using the video conferencing that will be extended to the Labs of the Technopark.

If one asks why the North African and Middle Eastern countries have not been able to line up with the International development, after decades of independence, he would get a tangle of answers. Among these answers, he would find the lack of appropriate and up-to-date scientific and technical information. The shortage in useful information, especially technology databases reflects badly on industry in this part of the world.

In the USA, students are frequently asked to prepare team projects, and usually collect their information from online libraries and archives and elaborate professionally their work. Pupils often give Power Presentations and talk about their projects before their peers. In Tunisia, students cannot get the needed information and are not trained in language arts and public speaking until they get their bachelor degrees. It is common that students and professors find them-selves frustrated and forced to terminate their projects as a consequence of bibliography deficiency. Researchers delay the publication of their papers because their peers obtain on time documents, while on average they use two to three year old references. The consequences of this situation are obvious, which did nothing but delay the endeavor of technology development and innovation in our country, which in turn alienate the business at all levels and reduces the international exchanges and cooperation, all of which turn out to be elements for peace and democracy.

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The library of the Information and Documentation Unit affiliated to Borj-Cedria Science & Technology Park, Tunisia, thus proposes to become the hub for its fellow-members and will provide them with a combined Distance Learning and Online Technical Documentary Center. The board of the Online Technical Documentary service (digital library) will select a broad range of databases, technical journals, conferences, newspapers, books, references,... that will cover the needs of a large and heterogeneous public.

Another intellectual merit of this project is that it creates an advanced learning center embedded in a Technopark that lent itself to outreach a large public. The endeavor of attracting the public to Libraries equipped with new technologies for learning is a great undertaking, since easy but low quality TV programs took over Library, and have reduced their roles in educating the public.

The benefits of this project are numerous, one of which is the enhancement of the education offered to Tunisian students which is excellent at the fundamental level but, as we know, is still lacking practicality. We know also that this resulted in a reduced dynamics relevant to the country economy in connection with the nascent Tunisian industry. The courage of the students and their professors was not enough to harness their efforts with the economic development. Industry in Tunisia is actually barren from fruitful exchanges with the university, in addition to suffering from other stagnation factors. The causes are the lack of dialogue, which can be alleviated through communication, and the absence of technical support, which have the grassroots in data bases and scientific papers, and training in industry sites. Daily questions are for instance: how would it be possible for academia to help industry while they don't have access to useful technical data? How would it be possible for high school teachers to prepare their students to embrace engineering careers, when they are disconnected from the mass of information produced daily, from new technologies, and from the creativity around the world? For instance, nanotechnology is being taught in developed countries and the US is introducing it at various levels, but it has not reached yet our students, while some Tunisian scientists have done pioneering work in quantum mechanics and related fields, which are the basis of nanotechnologies.

Consequently, the installation of a modern online library integrated with a distance learning service is the rescuer of both academia and industrial arena in Tunisia and will serve to educate the public at large and to establish the missed communication channels. The use of information technologies and online options enable efficiently reaching the objectives of this project in an economic fashion.