



INTERNATIONAL TELECOMMUNICATION UNION TELECOMMUNICATION DEVELOPMENT BUREAU

**WORLD TELECOMMUNICATION DEVELOPMENT
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PLENARY MEETING

Brazil (Federative Republic of)

BRAZILIAN EXPERIENCE IN HUMAN RESOURCES TRAINING - TRAINING CENTRES

Background

The Interamerican Regional Telecommunication Development Conference, held in Acapulco, Mexico in April, 1992, decided to support the founding and strengthening of educational, training and research centres in the field of telecommunications on a regional level, while recommending cooperation and use of new training methods and techniques. TELEBRÁS proposed, with the support of the ITU, the recognition of the Regional Center for Telecommunications Training (CRCT) - Unit Brazil, later approved by CITEL at the III Meeting of CCP.III, held in Buenos Aires, Argentina in September, 1993.

The CRCT - Brazilian Unit is a virtual entity comprised of all TELEBRÁS System (STB) training infrastructure, having begun its activities in 1994. Its main mission is to promote the integration of telecommunications among Latin American, and African Portuguese-speaking countries through the exchange of specialists and training activities within the TELEBRÁS System.

Since its founding, the CRCT - Unit Brazil has been providing many openings in courses, workshops, seminars, internships and technical visits at STB operating companies and Brazilian telecommunications industries for Latin American and African telecommunication companies, and has been despatching Brazilian experts as consultants to disseminate Brazilian technology among the countries of the region, with or without the support of international organizations.

The present situation

The main objective of the CRCT - Unit Brazil is to promote training and updating of professionals from the telecommunications field and from related areas, using its existing infrastructure and accumulated knowledge in order to strengthen the activities that Brazil, Latin American and Portuguese-speaking countries of Africa have been engaged in while seeking to improve the level and effectiveness of their human resources.

To achieve this major objective, CRCT seeks to:

- a) encourage participation by professionals from the Region in courses, workshops and events annually scheduled for STB training, with the support of national and international agencies;
- b) undertake activities for technical and managerial training specifically aimed at providing for the needs of the Region and using the existing infrastructure with support from international agencies;
- c) promote internships with participation of professionals of the Region;
- d) promote joint development projects that are appropriate to the specific needs of the Region;
- e) promote the development and use of new technologies for human resources training;
- f) enable the use of courses already developed in CBT - Computer Based Training;
- g) provide consulting services to interested countries in fields that are of specific interest to the Region; and
- h) participate in projects authored by the BDT (ITU Telecommunication Development Bureau) and by CITEL.

During its tenure the CRCT has been able to involve 27 participating countries, by means of international cooperation technical activities, outstanding among which were:

- a) 14 courses with a total of 137 participants;
- b) 4 seminars with a total of 62 participants;
- c) 9 technical visits and internships by other countries in STB operating companies or in Brazilian firms, with a total of 31 participants;
- d) 10 consulting services provided by 11 consultants.

Mention should also be made of the efforts to translate into Spanish the courses in point technology, which increased the number of trainees by 50 in 1997 alone.

The present deregulation of Brazilian telecommunications and the consequent privatization of the TELEBRÁS System, along with the ongoing and rapid updating of sector technology, has motivated the CRCT - Unit Brazil to adapt itself to a new environment. Among some of the steps taken, the most important is the strengthening of relations between the CRCT and the TELEBRÁS Research and Development Center (CPqD).

Located in Campinas, São Paulo and extending over an area of 46 000 m² the CPqD has more than 450 researchers, with 26 of them having their Ph.D. Founded with the objective of developing telecommunication technology based on national needs, interests and realities, the CPqD is today the most important research centre in the southern hemisphere. Working hand in hand with industries, universities and national and international research centres, the CPqD has developed and transferred to industry a large number of research projects in:

- switching
- integrated networks and services management
- technologies and services
- networks and telecommunications (transport and access)
- compatibility and interoperability
- support technologies.

Among the principal products, the outstanding ones are the Tropico digital switching centres, the public telephone system using inductive cards, single mode and multimode optical fibre technology, optical devices and amplifiers, various types of antennas for satellite and cellular communication, operation support systems, the details of which may be found in the paper "Brazilian Experiences in Telecom R&D".

The level of excellence shown by Brazil in R&D, particularly at the CPqD, is recognized by international agencies and organs specialists in telecommunications and has been constantly publicized by the CRCT among operating administrations and companies in Latin America and Portuguese-speaking Africa.

Such recognition is based also on the wide experience of the CPqD in training and consulting services, acquired over the years during its transfer of technology to industries and operating companies.

The CPqD is also capable of providing services in the fields of conformity and interoperability of systems, telecommunication products and services. Such action is of great importance so that the regulating agencies may have the means or instruments with capability to regulate the use of different technologies, present and future, and of the products resulting from the same and which is necessary regarding communication confidentiality, reliability and security.

Conclusion

With the deregulating of the Telecom sector in Brazil, and the consequent privatization of the TELEBRÁS System, the CRCT - Unit Brazil is undergoing changes to meet the need of aligning training and telecommunication R&D, broadening its field of action. There is always the possibility of increasing the provision of training, so they may deal with the needs of the sector.

In view of the above, the CRCT - Unit Brazil has changed its title to that of Regional Telecommunications Technology and Training Center (CRTCT) - Unit Brazil, directly connected with the CPqD.

Recognition of the CRTCT - Unit Brazil by the ITU and CITELE, as Brazil's worldwide representative agency in technology and training, will enable participation by representatives of the region in courses, seminars, congresses, internships and technical visits to the Brazilian telecom sector, in addition to joining in technical cooperation on a broader basis than that of the present time.
