

PROJECT NAME: Connected Schools in Paraguay.

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NAME OF ORGANIZATIONS:

- The MEC (Ministry of Education and Worship), of the Republic of Paraguay.
- COPACO S.A. (Paraguayan Communications Company), of the Republic of Paraguay.
- UEPP (Project Program Executing Unit), under the MEC.

INFORMATION ABOUT THE PROJECT

Connected Schools has as its main objective:

"THE IMPROVEMENT OF THE LEARNING CONDITIONS THROUGH THE INCORPORATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) IN EDUCATIONAL ESTABLISHMENTS AND EDUCATIONAL MANAGEMENT UNITS, IN PARAGUAY", implementing data communication services within the program promoted by the MEC (Ministry of Ministry Education and Worship) with the Data and Internet service provided by COPACO SA (Paraguayan Communications Company) through fiber optics in 962 Educational Institutions located throughout the Paraguayan territory.

BRIEF DESCRIPTION

The Connected Schools project has been carried out in the Framework of the Specific Agreement of Interinstitutional Cooperation between COPACO S.A. (Paraguayan Communications Company Sociedad Anónima) and the MEC (Ministry of Education and Science) for the "provision of data communication services"

COVERAGE

Paraguay is a country located in South America with an area of 406,752 square kilometers, with its main river called the Paraguay River; which divides the country into two regions: to the west the Western or Chaco Region and to the east the Eastern region. Its geopolitical division is through 17 areas called Departments.

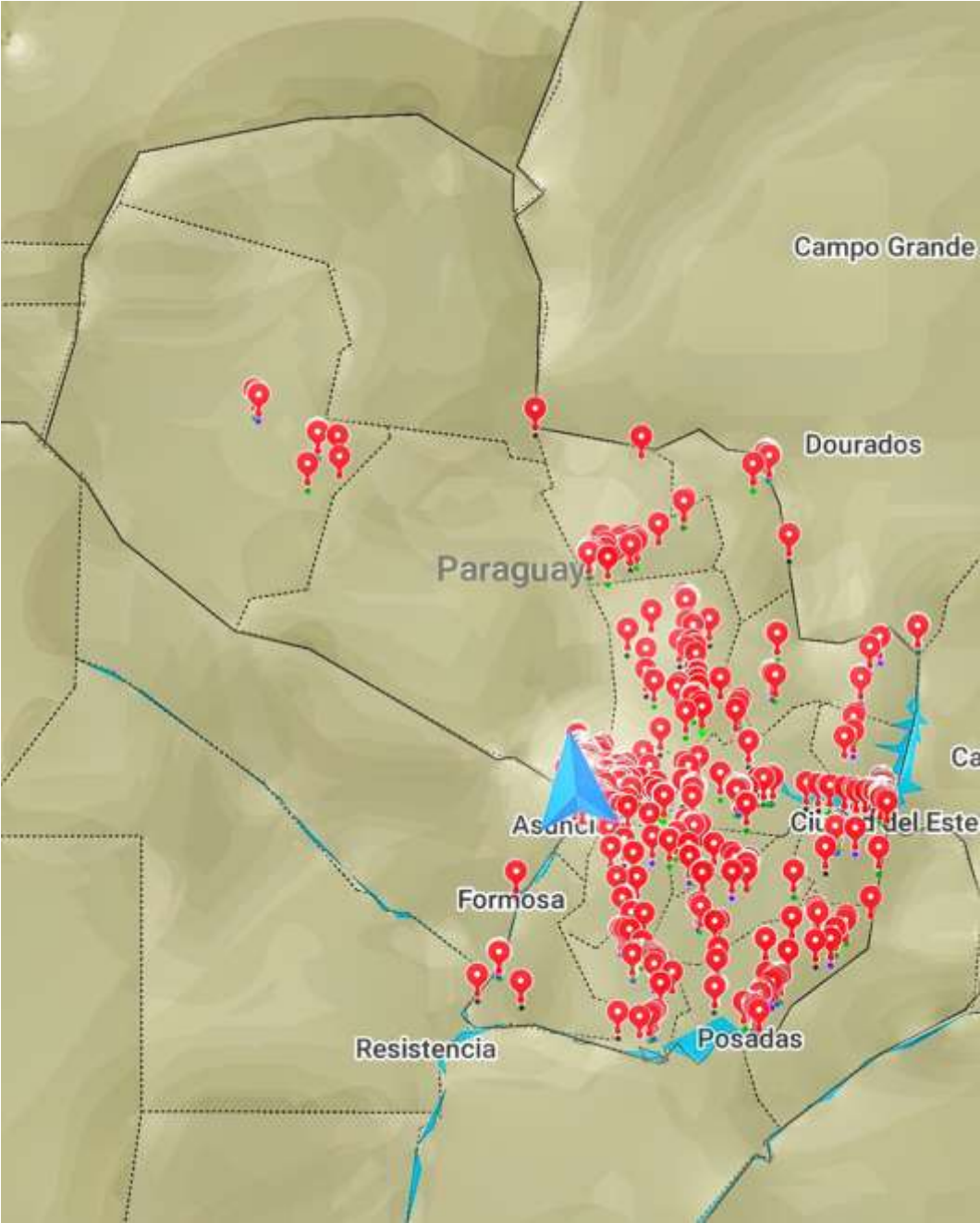
The School Connectivity Project, with National coverage, in both regions of the country, the last mile link has been deployed of approximately 1,200 kilometers of fiber optic, with a range of 962 Educational Establishments representing 1,707 Educational Institutions (An Educational Institution is a Primary Education Center (for children from 6 to 12 years old) or Secondary (for young people from 13 to 18 years old).

The project contemplates phases, starting with Educational Establishments with categories of Schools, they benefited 586,000 students and 15,000 teachers, who through the fiber optic connection obtain Internet service for any web page also accessing a Platform of Servers assembled by the MEC, which contains digital teaching systems for students as training for teachers. In a second stage of this project, it is planned to provide videoconferencing services for training students and teachers, as well as local and regional meetings for other projects.

This venture is a project of National interest because it contributes to the training of Paraguayan students and teachers and gives them the opportunity to access ICTs in the farthest parts of Paraguay contributing to the reduction of the digital divide for many children, young people and teachers representing a high percentage of the Paraguayan population, as well as the social and technological incursion in the field of ICT.

COVERAGE

The Phase of the 962 Educational Establishments with 4 aggregates is represented on the Map of Paraguay, giving a total of 966 Educational Establishments, with Start Date of Execution; February 2018 and Completion: April 30, 2019.



DETAILED DESCRIPTION OF THE PROJECT

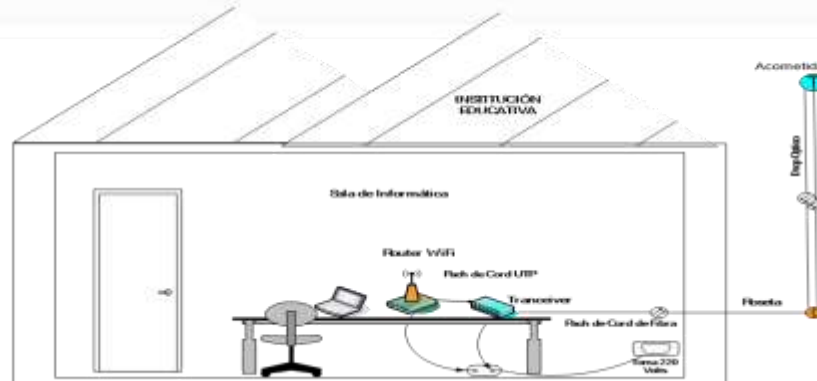
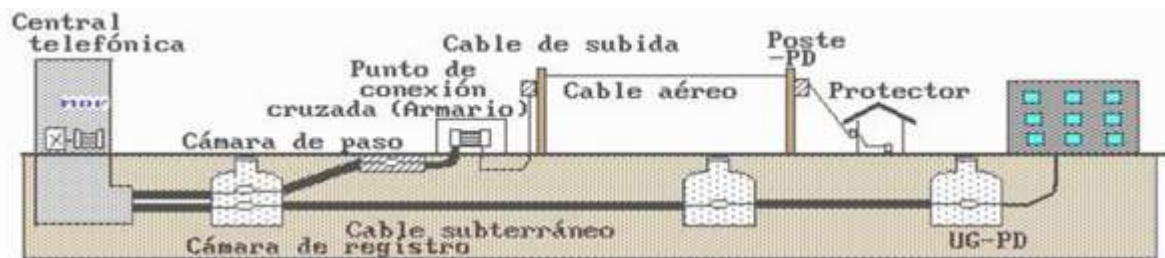
The project includes 2 technical strategies.

COPACO S.A. carries out the necessary fiber optic deployment in order to reach 962 Educational Establishments throughout the National territory, placing a transceivers team to connect and enable the Internet service with Quality of Service (QoS) in Schools with the bandwidth of the type: 8/15 Mbps (8 Mbps International, 15 Mbps National); transporting in the National IP / MPLS Network of Copaco; On the MEC side, Servers with Access Point Indoor and Outdoor were installed that provide Wi-Fi Internet throughout the establishment, as well as the contents for training students and teachers on servers, as well as a management center.

The Basic Scheme of deployment of the Fiber Optic Infrastructure in Educational Institutions has the following steps.

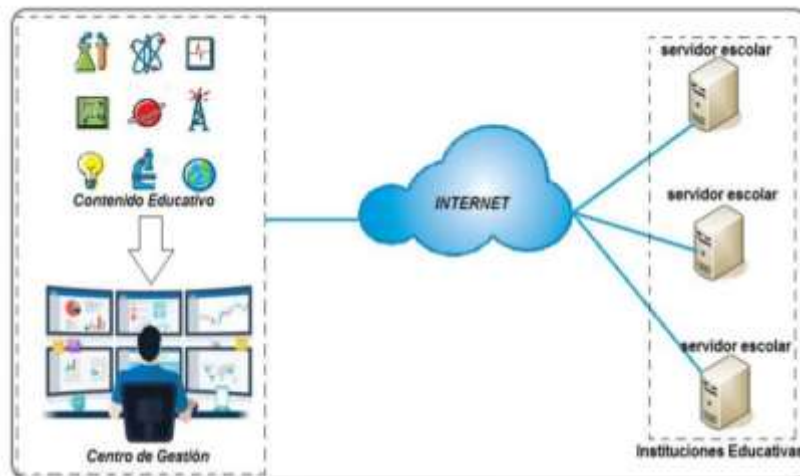
By COPACO S.A.

- Location in Google Map of the Educational Establishment.
- Project on the template of the Copaco External Plant in order to verify the fiber optic reserves in the aerial networks, the available fiber optic capacities, the necessary mergers and the existence of spaces in the closest underground chambers for fiber laying optics, which generates a pre project in kmz file format.
- Metric calculations of optical fiber, type of optical fiber, quantities of Accessories; How to be: hardware, clamps, posts, etc.
- Execution of the deployment of optical fiber from the nearest sleeve of the control panel with reference to the Access Switch.
- Execution of deployment of the optical drop to the physical place where the connection will be made through the optical transceivers and enabling the service in the School.
- Test protocols in order to guarantee the Bandwidth offered 8/15 Mbps in a Copaco System



By MEC

- Installation of Access Points to ensure reasonable coverage within the educational site.
- Installation and configuration of Content Application Servers.



Application servers have the following contents:

- LEARN FREE: Technology, English, Mathematics and Daily Life.
- BIBLIFILO: Dictionary of Philosophy, History of Philosophy and Religious Texts.
- LATIN AMERICA BLIBLIOTECA: Generalities, Philosophy, Psychology, Religion, Theology, Social Sciences, Languages, Mathematics, Social Sciences, Applied Sciences, Technology, Art, History, Geography, Children's Collections, Maya Language, Multimedia, School Texts.
- BLOCKLY GAMES: Puzzles, Labyrinths, Birds, Movies.
- E-BOOK MEC: Essential Learning - Guide for parents, Bilingual Booklet, Indigenous Education, Leo, Food and Learning, Prevention of Bullying and Child Abuse, Study Programs.
- EDU LAB: Learn Quijote, Spelling Exercises, English in the early ages, Spanish in the early ages and Small ICT.
- BIG BOOKS OF THE WORLD: Best fiction (108 Titles), Nonfiction (33 Titles), Adventures (121 Titles).
- HEALTH GUIDE
- KHAN ACADEMYEN SPANISH.
- MEDLINE PLUS, others

The data and the execution tasks must be fully coordinated and synchronized by the parties: MEC and COPACO S.A. for the success in the fulfillment of the schedules and the success of the Project.

IMPACT

The impact of Connected Schools is throughout the country, execution began in its First phase in February 2018 culminating on April 30, 2019, with 966 (962 +4) Educational Establishments and the Second Phase; Started on November 2, 2019 with 31 Technical Baccalaureate in different departments of the country, ending on November 29, 2019, thus closing the year with 998 Educational Establishments.

The project whose main objective is “THE IMPROVEMENT OF LEARNING CONDITIONS THROUGH THE INCORPORATION OF ICT IN EDUCATIONAL ESTABLISHMENTS AND EDUCATIONAL MANAGEMENT UNITS, IN PARAGUAY”, and is of vital importance for the Paraguayan society at the Education and Connectivity level due to which closes the year 2019 with benefits for more than 600,000 students and 20,000 teachers who now have means and programs to continuously train through ICT and the Internet, as well as obtain greater social incursion considering that 40% of Educational Establishments are located in the Capital zone and 60% in the Inland area of the country.

The Ministry of Education and Culture with the cooperation of COPACO S.A. and the financial support of the UEPP intends with this project to increase the technical and human skills of teachers in the most isolated areas of the country through constant training, curricular updates and seeks to motivate teachers and students to do use of ICT for the benefit of Teaching - Learning processes, thus leading to a better level of Education in Paraguay.

The MEC intends to reach 4,500 Educational Establishments in order to cover all the needs at the country level.

CHALLENGES

The challenge presented by this project is at the investment, management and training level, it is still necessary to develop a CALL CENTER (Service Center for System Users) of both sides MEC and COPACO to quickly manage the possible difficulties that arise at the communication level and use of resources, but one of the most important and relevant aspects is training, teaching teachers and students how the Connected Schools Programs works, training in the use of the applications of the different contents, so that the beneficiaries Who is directed, can make massive and intensive use and interact with the System, in addition to a strong investment in Infrastructure to reach the goal of 4,500 Educational Establishments.

Project Schedule

The First Phase start date: February 2018, End: April 30, 2019, Quantity: 966 Educational Establishments

The Second Phase start date: November 2, 2019, Completion: November 29, 2019, Quantity 31 Technical Baccalaureates.

Total Connected and Enabled Establishments 998.

Project Budget

The initial amount that was already invested in the Project for the 962 Educational Establishments was 29,201,520,960 Gs (Twenty-Nine Thousand Million Two Hundred One Million Five Hundred Twenty Thousand Ninety Sixty Guarani), equivalent to approximately 4,519,300 USD (Four Million Five Hundred Ten and Nine Thousand Three Hundred American Dollars)

PHOTOGRAPHS





