Students' Names: Tomás David – Marcos Garay

Date: March, 27th, 2020.

Company's name: Connection Express.

Introduction:

Hello, my name is Tomás David. I'm 45 years old, and I am the president of Connection Express. I am an Electronical Engineer. I graduated in the year 1998, and worked for IBM in the electronical area. In the year 2000, I quit my job in order to start my own company with Marcos Garay.

Hello, my name is Marcos Sebastián Garay, I'm 43 years old, and I am the vice president of the company. I graduated as an Economist, in the year 2000. I started the company right after that.

We are the founders of Connection Express; this is a company dedicated to providing new technologies to upgrade the internet connection in other companies and institutions. We aim to do that with cables that we design and build.

Connection Express is a medium sized company located in Paraná, Entre Ríos. We are located in 833 Gualeguaychú street. You can contact us via internet at www.connectionexpress.com.ar

The problem that we are here to address is that of slow, unreliable internet connection of UTN FRP. This is a problem that affects both students and staff, making it hard to use online material for classes or presentations.

Further into the presentation, we are going to describe our Project and our solution concerning this problem.

The presentation is going to develop as follows:

After giving a brief general introduction of our company, we are going to introduce our premises and facilities and our organization. Next, we are going to narrate our history as a company.

After that, we are going to talk about the problem that concerns the UTN. We are going to describe it, and explain how we plan to address this problem.

Finally, we are going to give you a short conclusion of this project and the relevance that it has for students and staff.

Market and Services:

In this section we are going to talk about the market and services that Connection Express offers.

We are able to provide our services to all the province. We work with institutions which decide to contact us, and with private companies that provide internet services, like Fibertel.

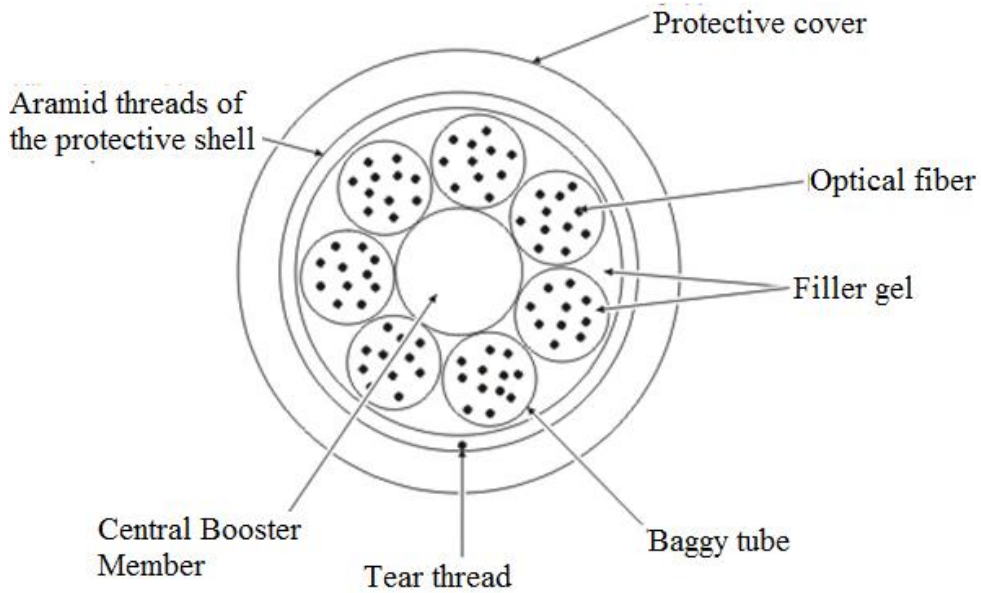
Connection Express designs and builds optic fiber cables. These are a type of cable new to the market, and are capable of transmitting data faster. These cables are the basis of our business.

Also, as a service, we install the cables in order to provide a better and more stable internet connection.

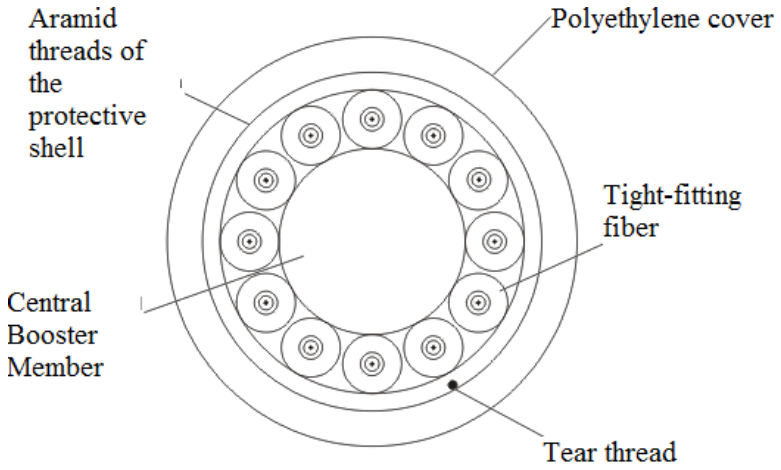
Now, we are going to show you our product list.

Product List:

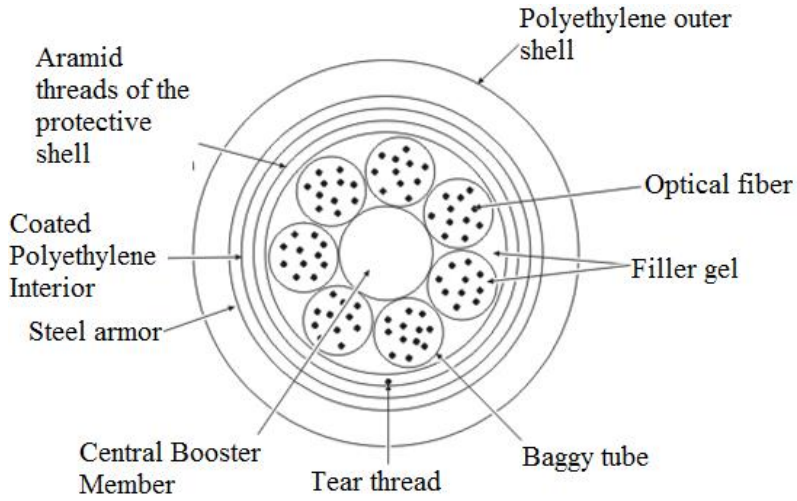
Loose structure cable:



Tight structure cable:



Shielded cable:

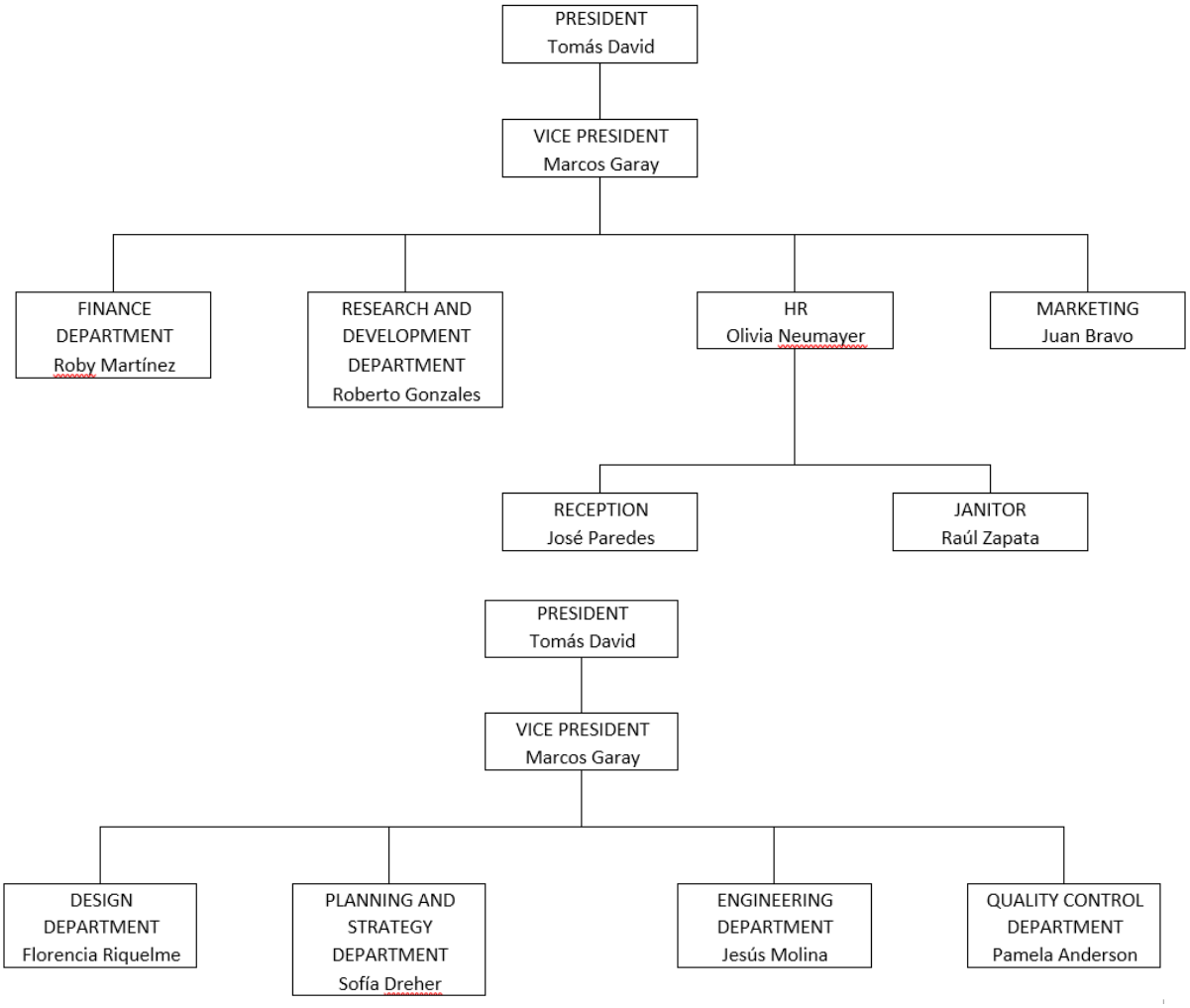


Self-supporting Aerial Cable

Brief description:

- The loose structure cable consists of several fiber tubes surrounding a central reinforcing member, and surrounded by a protective cover.
- The tight structure cable is designed for short cable routes, and small buildings.
- The shielded cable has excellent crush resistance and rodent protection properties.
- The self-supporting aerial cable is a cable designed to be used in aerial structures.

Company Organization:



Now, we are going to talk about our organization as a company.

- The president of the company is Tomas David, an Electronics Engineer. He is in charge of all the areas of the company, plans strategies and takes the most important decisions of the company.
- The Economist, Marcos Garay, is the company's Vice-President. He shares the work of planning strategies and managing work areas. Both of us have the legal and financial responsibility of the company and we lead the organization to their goal.
- In the Finance Department, the person in charge is Roby Martínez, an Economist, who worked seven years in Personal, a telecommunications company, as an accountant. He is responsible for the accounts of the company and to budget the finances for each year.
- In the Research and Development Department, Roberto Gonzales, a Robotic Engineer, is responsible to look for new technologies. These technologies are intended to position us in a better place in the market. Roberto

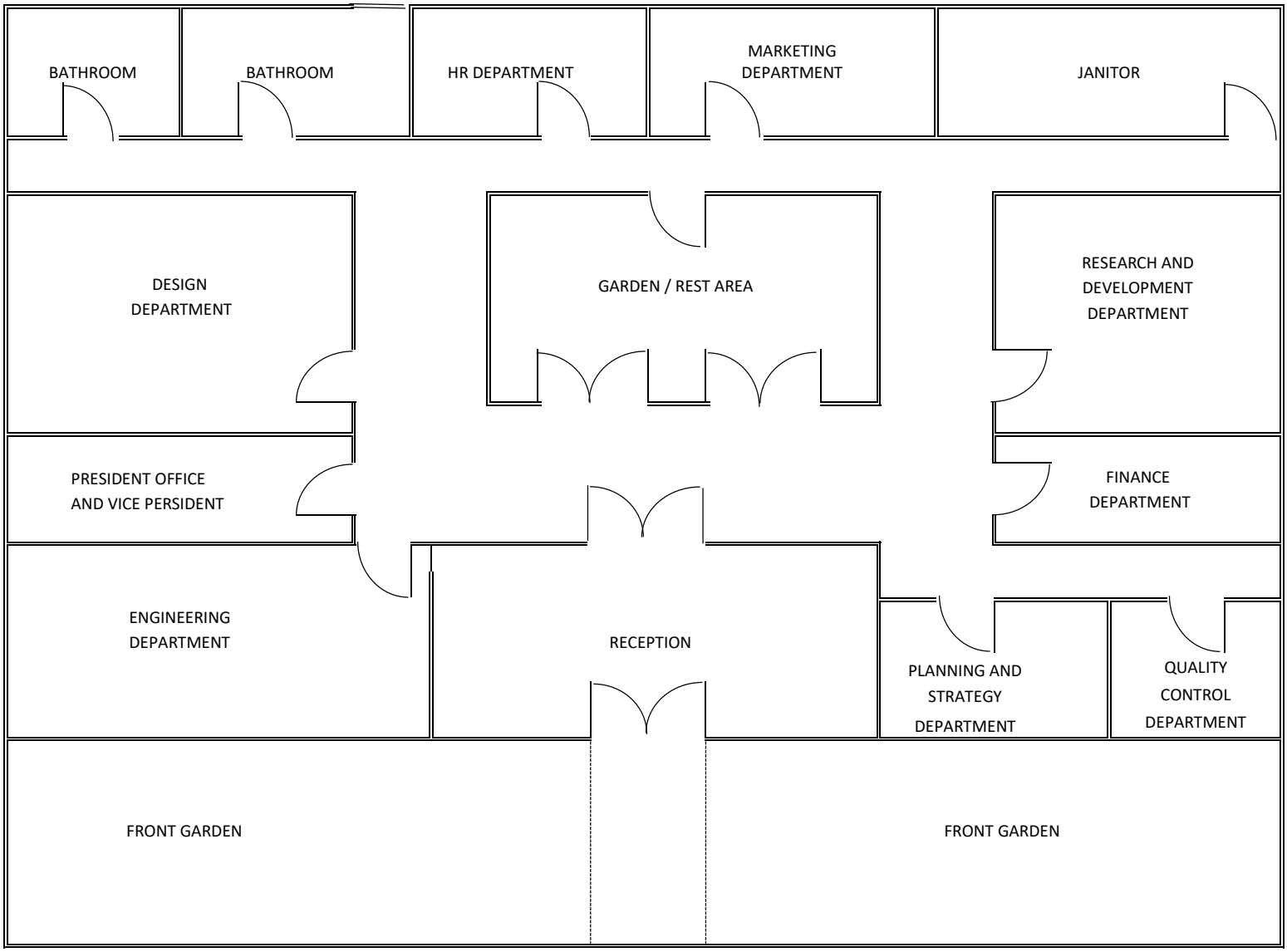
graduated from the UTN in the year 2003 and immediately started working with us.

- The Engineering Department build the cables and collaborates with the R&D Department looking for new technologies. The boss of the Department is Jesus Molina, an Electronics Engineer. He is a beginner, but we saw great potential in him.
- The Planning and Strategy Department carries out the projects. It works together with all the departments. The boss of the Department is Sofia Dreher, a Business Manager. Sofia worked 7 years in a business company. The P&S Department is going to carry out the UTN project.
- The Human Resources (HR) Department ensures the welfare of the workers and manages the hiring of the staff. The boss of the Department is Olivia Neumayer, a Human Resources Specialist. Olivia worked 5 years in the province's government house.
- Juan Bravo is the boss of the Marketing Department. He is currently in his last year to become a marketing specialist. This Department has the goal of making the name of the company known, and, as a result of that, gain new customers.
- The Boss of the Design Department is Florencia Riquelme. She studied graphical design in the Palermo University, she works with us, and as a freelancer. The department's function is to create designs of the cables of the company.
- The Boss of the Quality Control Department is Pamela Anderson, an Electronics Engineer. She worked 10 years in Cartocor. This department has the objective of verifying that all final products are in adequate conditions.
- There are two areas subordinated to human resources, which are the reception and the janitor. José Paredes is in charge of the reception and Raúl Zapata is in charge of the janitor.

The reception assists people that enter the company, and she refers important people and phone calls to the president's office. This area also administers the agenda of the company.

The janitor is dedicated to maintaining the building clean.

Premises and Facilities



Now we are going to describe our company premises.

Connection Express is located on 833 Gualeguaychú in Paraná. We only have a ground floor.

There you can see the garden and a path that leads to the reception. There we have our first meeting with our clients.

Behind the reception there are a hall and a garden that is our rest area. This garden is surrounded by walls that are made of glass. The hall is surrounded by hallways.

In the hall, if you turn left twice you are going to find the Engineering Department's office. And, if you turn right twice, you are going to find the Planning and Strategy Department's office and, next to it, the Quality Control Department's office.

In the right hallway there are two offices and the janitor's office. There is the Finance Department. Next to it, there is our Research and Development

Department. If you continue down the hallway and you turn right, you are going to find the janitor's office, opposite the Research and Development Department.

Behind the garden, there is a back hallway. Next to the janitor's office, there is the Marketing Department's office and next to it, you can find the Human Resources Department's office.

On the left hallway there are two offices and two bathrooms, one for women and one for men. There is the president and vice president's office. Next to this one, you can find the Design Department's office. Following down the hallway and turning left, you are going to find the bathrooms, opposite the Design Department.

Company History:

Now we are going to talk about the company history.

Connection Express was founded by us in the year 2000. The idea of opening a company of optic fiber cables to upgrade internet connections was born while we were studying. After our graduation, we decided to form a society and work together.

We worked a whole year in Tomas' house starting with the first cable design. A year later, in 2001, we could manage to open an office in a small building, in Paraná. In 2003, we were able to open a Research and Development department, and an Engineering Department.

Connection Express started growing. In the year 2005, the company installed optic fiber cables in Fibertel's offices in Paraná, opened a Finance Department, and hired an accountant.

In the year 2006, as a company, we decided that it was a good idea to have specialized staff dedicated to the design of the cables. With that in mind, we opened the Design department. We opened a Planning and Strategy department as well, to define new strategies for the future of the company.

As of the year 2008, Connection Express increased its market share. We got contracted by Telecom Paraná to do an installation. This opened a lot of possibilities for the company. In 2010, we were able to expand our business to other places in the province.

The small building became too small for us. As a consequence, in 2014, we bought our own terrains at 833 Gualeguaychú street, and built our own building. This new building was far bigger than the one we had before, and that allowed us to build more facilities. In 2015, we opened the Human Resources department, a Quality Control department, a proper reception and a janitor's office, and hired people for the new areas.

In the year 2016, we, looking forward to gain more customers, opened a Marketing department. As a result of that, in 2017, we expanded our business to the whole Entre Ríos province. We designed cables for AR Comunicación SRL, a company based in Concordia.

Today, Connection Express is a reference company in the province because of the good service and the quality products that we offer to other companies and institutions, and is pointing to expand to more provinces in the future. Connection Express became notorious in the industry because of its more efficient, faster cables, which provide a better, more stable internet connection. These cables are a new, uncommon technology. Nowadays, it has 8 departments, a reception and a janitor's office.

Problem Description:

Now, we are going to talk about the problem addressed in this project.

What is the problem about: The problem that concerns the UTN, and the one we seek to solve, is an issue regarding Internet Connection. This is a problem for both students and teachers because they try to use the service regularly.

In this picture we can see a student with her laptop trying to log into her account of the FRP virtual campus, and she is being affected by the lack of connection.

Another problem that arises from this issue is that of the "connection lag". This is a problem that affects most of our clients. In the left picture, we can see how the professor is trying to solve the slow connection problem that is stopping the student's work.

The cables that are currently installed in UTN are low quality ones, and are not capable of giving a good connection to the building. This is the main cause of internet poor performance. Another cause is the low importance that the institution gave to the internet service.

These are the consequences:

- Wi-Fi in UTN FRP is slow and sloppy. As consequence of that, the Wi-Fi is unreliable for students and professors.
- It has a lot of blind spots all around the building. As a consequence, there are many places where you are not going to be able to use the internet.
- The net saturates frequently. This means that when there are a lot of people connected, the internet is prone to fail.
- Current cables are not capable of an efficient transmission of data. This makes for less stable connection.

Negative Impact of this situation: Problems that rise from this issue are plenty. Students often can't get access to online material, because there is no service. Professors who use Google Drive or similar cloud services might not be able to download presentations. Sites like YouTube, Phet Colorado and such, which have a lot of useful content, are unreachable without Internet.

Project Description:

In the last part of this presentation, we are going to describe by stages how we are going to face up the UTN's problem regarding slow internet connections.

Stage 1:

Firstly, Our Planning and Strategy Department is going to visit the university, in order to conduct a research. In this research, we are going to determine the quality of the internet service, all around the building. With that in mind, we are going to use a special software, to certify its quality. Once the software gives us information about how the service is received in UTN, our employees are going to investigate the hardware used in the building. After that, the Research and Development Department and the Engineering Department are going to decide which cables are suitable to use, in order to get the best performance. Lastly, our Design Department is going to design the cables.

Stage 2:

Our plan is going to develop as follows:

Order the routers: There are 3 routers, one in the library, one in the upper floor, and one in the computer laboratory. We decided to order 7 routers which are going to be placed as follows: one in the library, one on the front-hall, 2 on the 1st floor corridors, and 3 on the upper floor.

Choose the cable's type: Connection Express works with 4 types of cables, which are: loose structure cable, tight structure cable, shielded cable, self-supporting aerial cable.

The best optic fiber cable for the UTN FRP is the Loose Structure Cable. We decided that, after we analysed the entire building and its properties. Also, it is going to be extremely durable.

Install the cables: The Engineering Department is going to install the Loose Structure Cable inside the building. We are going to remove old cables and routers, and install the new ones.

Install the routers: The Engineering Department is going to place them in the places previously mentioned. Then, we are going to connect the cables to the routers, closing the circuit.

Testing: We are going to initialize the system and then, with a dedicated software, we are going to test that the whole system responds well.

Stage 3:

On stormy days, we might not be able to work, because it might damage our product. In that case, we are going to take that time to install the Cables, without connecting them to the electrical source.

If any of the parts of the circuit were not working, we are going to have spare parts. If anything were to break, we are going to fix them ourselves.

If there were a strike in the faculty, and we weren't able to work, we are going to try to contact anyone available to come and open the faculty for us to work. If not, we are going work on a Saturday, charging a bit extra.

Conclusion:

We, as a company, have always done our job well. Our clients' satisfaction is the guarantee that we offer.

We guarantee that, both students and professors, are going to benefit with the modifications that our company is going to make. Providing the best data transmission to institutions is our main goal.

We grant you that Connection Express is going to supply the university with the best cables in the market. By contracting us, you are making a good investment, and the best decision.