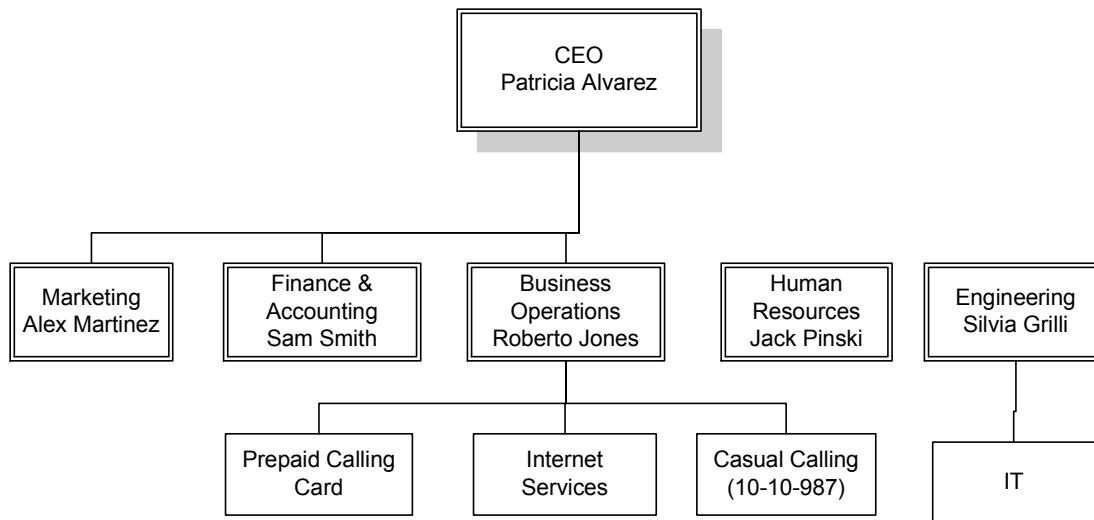**Presubscribed Client System**

TeleRapid Corporation was founded in 1995 on the premise to provide the Latin American and Caribbean countries with end-to-end voice and data communication services. Initially, TeleRapid focused on providing pre-paid calling cards and Casual Calling Services ("10-10-987") to a predominantly Hispanic customer-base. To expand their business, they want to start offering Presubscribed Long Distance Calling. This is seen as a better business than requiring clients to dial 10-10-987 in front of every call they make.

TeleRapid Corporation is located in Miami, FL and has approximately 150 employees and generated $35M in revenue in the most recent year. The majority of their clients are located in Florida, Texas, California, New York, and Illinois. The business is organized as shown below.

```
                          ┌─────────────────┐
                          │      CEO        │
                          │ Patricia Alvarez│
                          └────────┬────────┘
     ┌──────────┬──────────┬───────┴──────┬──────────────┬──────────────┐
┌─────────┐ ┌─────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐
│Marketing│ │Finance &│ │ Business │ │  Human   │ │Engineering│
│  Alex   │ │Accounting│ │Operations│ │Resources │ │Silvia     │
│ Martinez│ │Sam Smith│ │Roberto   │ │Jack      │ │Grilli     │
└─────────┘ └─────────┘ │Jones     │ │Pinski    │ └────┬─────┘
                        └────┬─────┘ └──────────┘      │
            ┌───────────┬────┴──────┬───────────┐  ┌───┴───┐
      ┌──────────┐ ┌─────────┐ ┌──────────┐     │  │  IT   │
      │ Prepaid  │ │ Internet│ │  Casual  │        └───────┘
      │ Calling  │ │ Services│ │ Calling  │
      │   Card   │ │         │ │(10-10-987)│
      └──────────┘ └─────────┘ └──────────┘
```

To understand the project goals, the systems analyst Jane, has an interview with Alex Martinez. Alex is the Director of Marketing who is sponsoring this project.

Interview #1

Alex   Thank you for coming here to discuss the proposed project.

Jane   Yes, thanks for taking the time to explain the purpose of the project and what you would like to accomplish.

Alex   Yes, this is a very important project because in order for TeleRapid to continue growing we need to expand both our customer base but also the services we offer. We are now large enough that we need to start thinking about attracting pre-subscribed clients. Currently, our 10-10-987 dialing number is doing good business, but it is very easy for these customers to switch. We want to lock them in to some extent by getting these customers to subscribe to us for their long-distance telephone needs. In this way, our services are used automatically for long-distance whenever they make a telephone call. This is also more convenient for them because they won't have to dial so many numbers to use our services.

Jane	Approximately how many casual calling customers do you have now?
Alex	In any given month, we have approximately 60,000 separate customers and the average bill is a little less than $20. Of those 60,000 customers about half are regular customers who use our services multiple times a month, every month. It is these customers that we would want to convert to presubscribed customers. Their average bill is double the overall average.
Jane	So, what would make this project successful?
Alex	I think if in the first year we can convert about 15,000 customers then the project is successful. After the second year, I would like to covert closer to 25,000 to 30,000 customers.
Jane	What type of growth would you expect over the next five years for the pre-subscribed services?
Alex	For our other telephone services we have experienced a 10-15% growth each year. As we saturate the Hispanic market this is likely to drop off. But our forecasts show that we should continue for at least the next five years to have growth of approximately 10% per year in the number of customers.
Jane	Organizationally, who will run the presubscribed operations?
Alex	We will form a division under business operations with a product manager who will be responsible for all aspects of the presubscribed business. The project manager will work with me in Marketing, Silvia in Engineering, and Sam in Finance to obtain the resources and services they need from our respective units.
Jane	When is the deadline to start operations?
Alex	We want to start operations in the second quarter of next year. So this gives you about 1-year to develop the processes, organization, and systems necessary to start operations.
Jane	What are some of the initial priorities in your opinion?
Alex	First I think we need to design an overall process to acquire customers and activate their accounts. We'll have to work with the LEC's to do this and we'll have to get an outside company to do the government-mandated third-party verification. Our initial client contact list will be our casual calling customers. But then later I think we need to move beyond that list to grow the business.
Jane	What about various systems?
Alex	Well, that's not my specialty; you'll have to talk to Silvia in Engineering and others. But, yes – we will clearly need a database to support the operations. I would hope that our existing databases can serve as a starting point. Also, we will need a system to run the operations.
Jane	Once operations are up and running how many employees do you see working in this division?
Alex	Our current casual calling division has 18 employees, so I would expect this new division to have about the same. Once you have the process design we'll have to define jobs and start recruiting. Jack in Human Resources can help us do that.
Jane	About how many people do you expect to work on this project?
Alex	We were thinking that a small team of maybe five could do much of the work. As you need special help we can temporary release people from other departments to get this going. If you think you need more people you just let me know – this is a high priority and we do not want to miss our proposed launch date.

Jane   How large of a budget do you expect for the project?

Alex   If we keep the project to less than $600,000 then it should payback in two-years or less, assuming we meet our targets for signing customers up. But, remember the schedule is more important because if we're late we might lose customers and this becomes a public relations problem.

Jane   OK, I think I have enough to put together a project charter. I'll make a draft copy and send it for your review before distributing it. If there is anything else I need to know can I contact your?

Alex   Yes, you can also call my assistant, Marc Boyer. He's really knowledgeable about what we're trying to do and can be a great help.

Background of Telephone Subscribed Process

The US opened up the long-distance telephone market to competition. Today, as a telephone service customer you can choose from among 200+ long distance carriers. Attached is the process model for a Miami-based telecommunications company for what they call the "presubscription process."

The presubscribed process covers the process of working with prospective clients to establish long-distance telephone accounts with ***The Telephone Company***, obtaining third party verification for those accounts, and then requesting activation of the account from the local exchange carrier. The process starts with either The Telephone Company contacting the prospective client or a prospective client contacting The Telephone Company. The process ends with activation of the client's long-distance account.

The process should be supported by a Presubscribed Information System. Some activities are external to The Telephone Company (e.g., by definition third-party verification) or out of scope for the system. If you need an idea of the type of information needed for long-distance, review your telephone bill and use Internet search engines.

Overall Process

The overall process involves two departments in The Telephone Company; the Sales Account Executive and the System Administrator from IT. In addition, the process must interface with external organizations for Third Party Verification (TPV) and the Local Exchange Carrier (LEC) for activation and cancellation of long-distance accounts. Initially, the company will use their Outbound Information List (a list of all users of their prepaid card) to identify potential clients to subscribe. They will also advertise and expect to receive inquiries from prospective clients directly about establishing a long-distance account. The primary outputs of the process are activation/cancellation files and various reports.

Provide Sales Service

The subprocess includes seven distinct process steps. Either a prospective client contacts or is contacted by The Telephone Company. Throughout the process the Sales Account

Executive completes all the process steps (except generating sales report, which is performed by IT). During these steps the Sales Account Executive is on the telephone with the prospective client. A major resource is to be the Presubscription Information Systems to provide the Sales Account Executive needed information and the workflow to sign up the customer.

Third Party Verification (TPV)
TPV process involves transferring the prospective client call to the TPV Provider for verification. This process step is mandated by the US Government regulation to prevent "slamming" and other fraud. The TPV records and verifies the client information and contract. The TPV sends the verified client information to The Telephone Company (IT Department) where the verification is registered.

Since TPV is an external organization to The Telephone Company there is a need for inter-enterprise integration. The company should examine the information flows between The Telephone Company and the TPV for efficiency, interoperability, and coordination.

Activation or Cancellation
The Activation or Cancellation process creates the activation/cancellation files in a directory of a computer for transferring client data to the LEC. The purpose is to activate the client's long-distance account with The Telephone Company (the LEC). As with the TPV, this involves integration with external organizations (the LECs). We should analyze the performance of the interoperation for efficiency, interoperability, and integration.

The second part of the process is receiving the files from the LECs. These files are received, the database is updated in the presubscribed system and any errors in the ANI are corrected.

Correct ANI Error
The ANI errors are sorted by type, error reports are generated, and depending on the error type they are corrected. This process is performed by the System Administrator.

Terminology:

ANI = is the account number (Automatic Number Identification)
LERG = a lookup table to validate ANI
TPV = third party verification (as required by government regulation)
LEC = local exchange carrier; i.e. the company that has the telephone wires running to your home

Background on How Long-Distance Telephones work

Before a long distance telephone call can be completed from any telephone line, the telephone subscriber must first select a long distance carrier, such as Sprint or AT&T.

This carrier is the one that will carry the long-haul portion of the telephone conversation across the majority of the distance between the two parties, connecting the caller's local telephone company (LEC) to the recipient's LEC. When the subscriber selects a long distance carrier, a three-digit code for the primary interexchange carrier (PIC) is attached to the telephone account and programmed into the caller's local switch. When a long distance call is placed, the switch uses this PIC code to route the call appropriately. Some companies, especially wireless companies, simply use their own networks (and their own PIC codes) to complete the long-distance calls on their own network, though carrying the full long-distance call is rare for any company.

Once a carrier is selected and a PIC code is assigned, the telephone subscriber can place long distance calls. Modern telephone companies process all calls using automated (generally digital) telecom switches, such as the Lucent 5ESS and Nortel DMS100. These switches automatically complete calls within a fraction of a second, and record billing information for local toll and long distance call. The time and date of each long distance call are noted by the switch for later billing, and the switch initiates the call set-up path using an out-of-band signaling system.

Long-distance telephone calls are placed by dialing 1, followed by the area code and telephone number of the called party. Dialing the number 1 before an area code identifies the call as long-distance and signals the local switch to hand off the call to the previously identified long distance carrier. The carrier then uses the next six digits of the telephone number, the area code and prefix, to determine the called party's local exchange carrier based on number assignments made by the North American Numbering Plan Administration (NANPA). With this information, the long distance carrier sets up a series of circuits to connect the caller to the recipient's local carrier who then completes the call to the recipient's line. This entire process is completed in one second or less and, because all of the signaling is completed across a different path, is completely transparent to the caller.

If, from California, you dialed 1-212-555-1234 -- a New York number -- the 1 identified it as a long-distance call, telling the local switch to connect to a long-distance switch. The 212 told the long-distance switch which long-distance line to grab. The 555 told the long-distance office in New York which local office to connect to. Then the local office would connect you to your friend. The computers in each office would pass the number along as digital data via data lines connected between the switches.