



American Roaming Network, Inc.  
7999 North Federal Hwy, 4<sup>th</sup> Floor  
Boca Raton, Florida 33487

Phone: 561-860-9028  
Fax: 561-443-6717  
[www.americanroaming.com](http://www.americanroaming.com)

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# American Roaming Network, Inc. Product Overview

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# 1. Introduction

**American Roaming Network (ARN)** was established in 1992, to facilitate the FCC Mandate for un-registered roaming. ARN started with five carrier sites and by 1993 ARN had added 101 carrier sites, bringing the total number of locations to 106. In 1994, 95, and 96, ARN continued its growth and by the end of 1996 ARN had 175 wireless carrier sites. In 1997, ARN added 179 sites; bring the new total to 354. 1998 to 2000, as of 2007 ARN kept up the pace with a total of 1003 carrier switch sites across the U.S., Caribbean and International locations.

**Today**, ARN is the largest provider of unregistered roaming services to a majority of the carriers in the U.S. American Roaming Network processes over 23 million calls each month that originate from un-registered or de-activated mobile phones. ARN is the premier provider of CDMA roaming in the US servicing 100% of the top seven US wireless carriers and other national and regional wireless carriers, as well as international carriers.

**911 Calls Are Free Of Charge.** Roadside Services and other calls to the U.S., Canada and International areas are billed to a credit card, collect, calling card or with the American Roaming Collect PIN account.

**American Roaming Network** is a software application designed to provide billing services and call completion to serve cellular direct-dialed calls within the home country as well as North America and rest of the world.

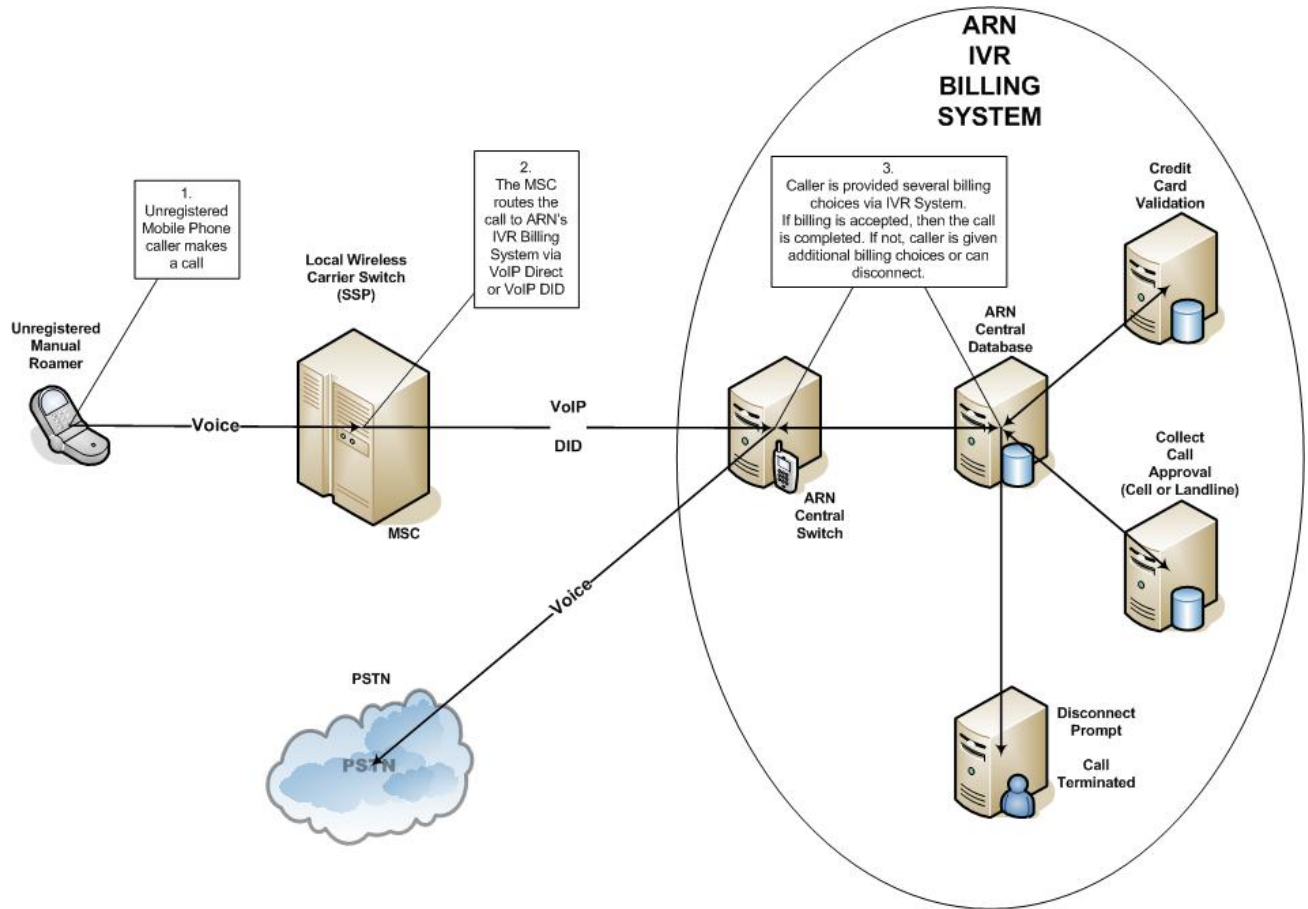
American Roaming Network uses a proprietary Integrated Voice Response (IVR) system to process the billing of each call without live operator assistance. These helpful voice prompts guide callers through each step of the billing process. If a caller enters erroneous information, the systems provide the caller with an opportunity to re-enter the missed digits.

ARN's centralized system controls call completion based upon the results of users input and the billing validation. If the billing method is valid, the system allows the switch to complete the call. If the billing method is not valid, then the system does not allow the switch to complete the call and then offers the user an alternative method or the user disconnects.

American Roaming Network system is technology agnostic and is operating with GSM, TDMA, CDMA and AMPS networks

For further information about ARN, visit [www.americanroaming.com](http://www.americanroaming.com) or [www.arncollect.com](http://www.arncollect.com)

Figure 1-1 American Roaming Network Overview



## 2. Components & Architecture

**The needs at each MSC CO Switch** are assessed per order to provide the most efficient installation of VoIP equipment and/or VoIP DID to connection to American Roaming Network's WAN and ARN's Centralized RSU/IVR system. Each site may contain one or more VoIP DID's and/or VoIP devices, depending on the specific requirements.

**Remote Service Unit/Integrated Voice Response (RSU/IVR).** The ARN RSU/IVR System is a computer that is installed in our Centralize Networks Operational Center in South Florida and is a redundant facility.

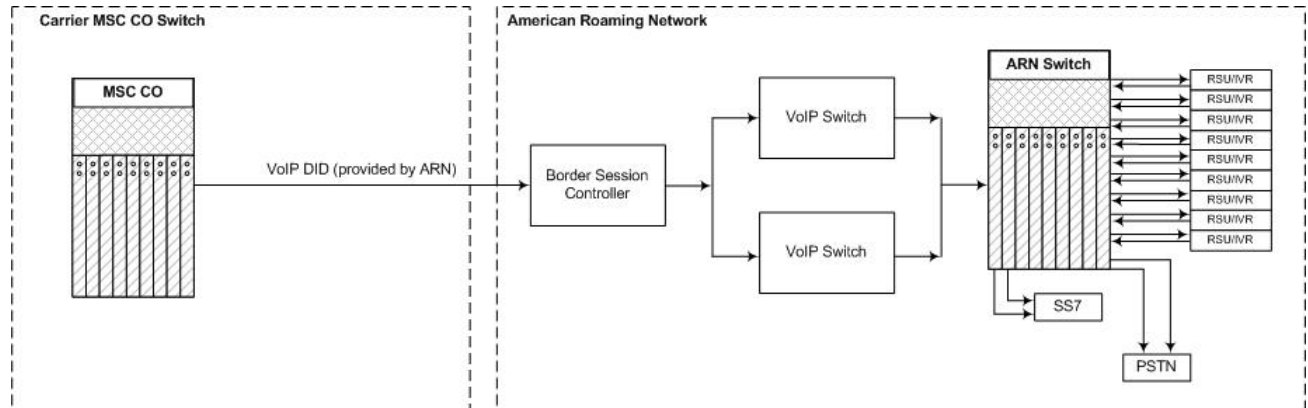
**The RSU/IVR** uses the Windows 2000 operating system and all are members of American Roaming Network Windows domain. The Windows 2000 domain provides the operating system level security necessary to access resources on the American Roaming Network. Each RSU/IVR is uniquely identified by an IP address and is configured with a corresponding subnet mask and default gateway. The default gateway represents the route to which the RSU/IVR forwards the IP packets on to the American Roaming network.

**The VoIP DID** is provided by ARN to the MSC CO switch with matching NPA-NXX as the switch location. This VoIP DID is configured in the switch in order to route all unregistered cellular calls to ARN's Centralized RSU/IVR system. (See Figure 2.1 below)

**The VoIP device** is connected at each MSC CO switch with a single T1 or E1 for call origination from the MSC CO Switch and a dedicated IP address for terminating the call via VoIP to ARN's RSU/IVR System. (See Figure 2.2 below)

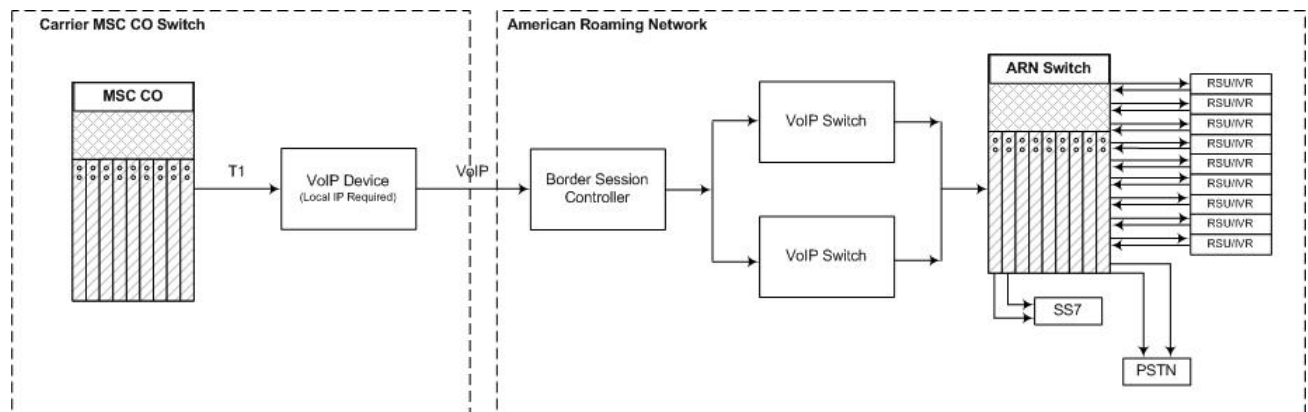
**Figure 2-1 VoIP DID Routing**

Unregistered Call arrives on the local MSC CO and is then routed to a pre-assigned VoIP DID that ARN provides to the Carrier by NPA-NXX. The call is then transported to ARN's Centralize Networks Operational Center for billing and termination processing.



**Figure 2-2 VoIP Device Routing**

Unregistered Call arrives on the local MSC CO and is then routed VoIP Device with a dedicated IP that ARN provides turn-key to the Carrier, at no charge. The call is then transported to ARN's Centralize Networks Operational Center via VoIP for billing and termination processing.

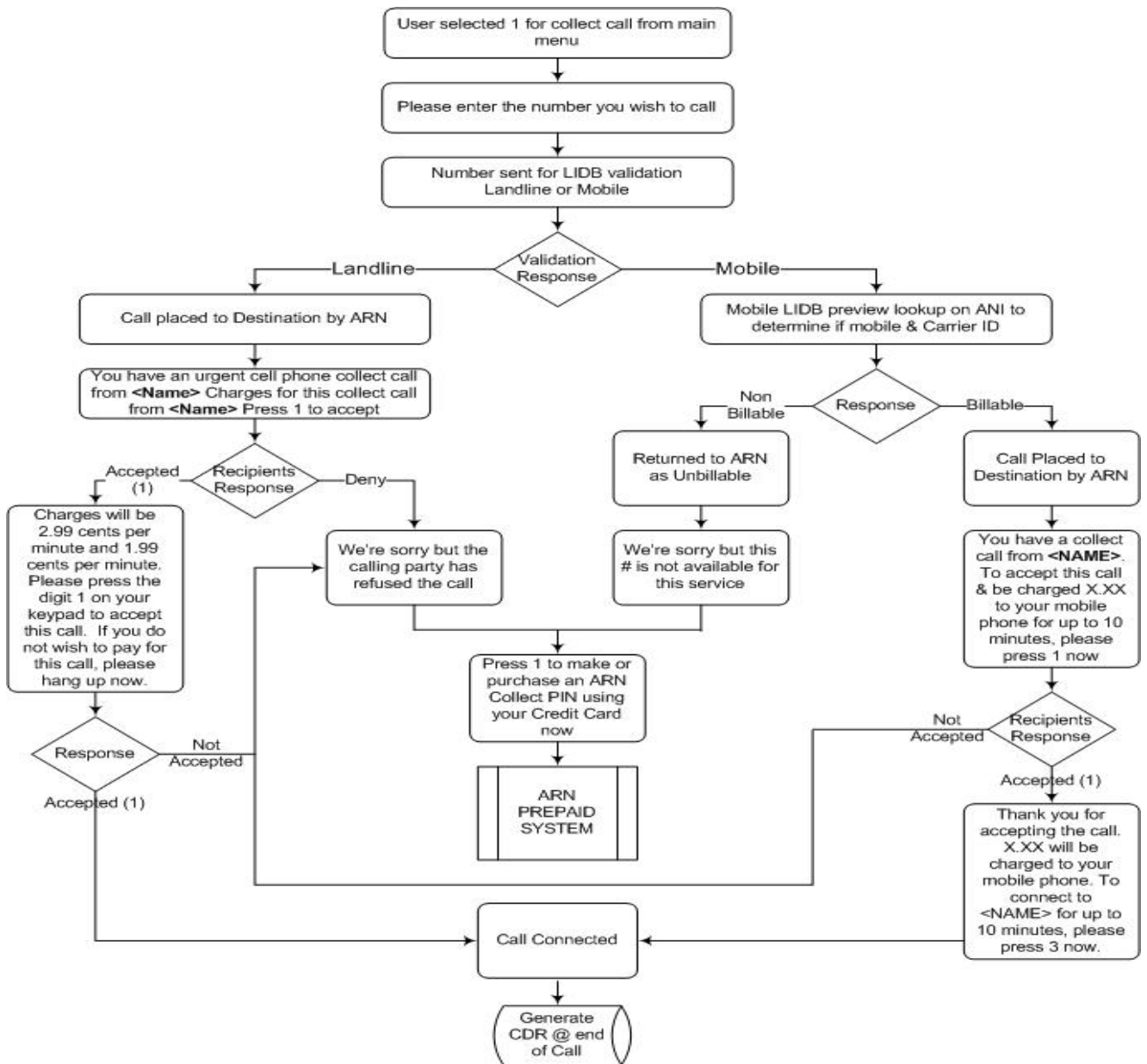


### 3. Call Flow Scenarios

American Roaming Network processes each call based upon the caller’s billing preference. The caller may choose to make using collect call to Landline, collect call to Mobile (SMS), US credit card or calling card per minute or ARN Collect PIN in increments of \$10, \$20 or \$30 “Prepaid” amounts using a US credit card.

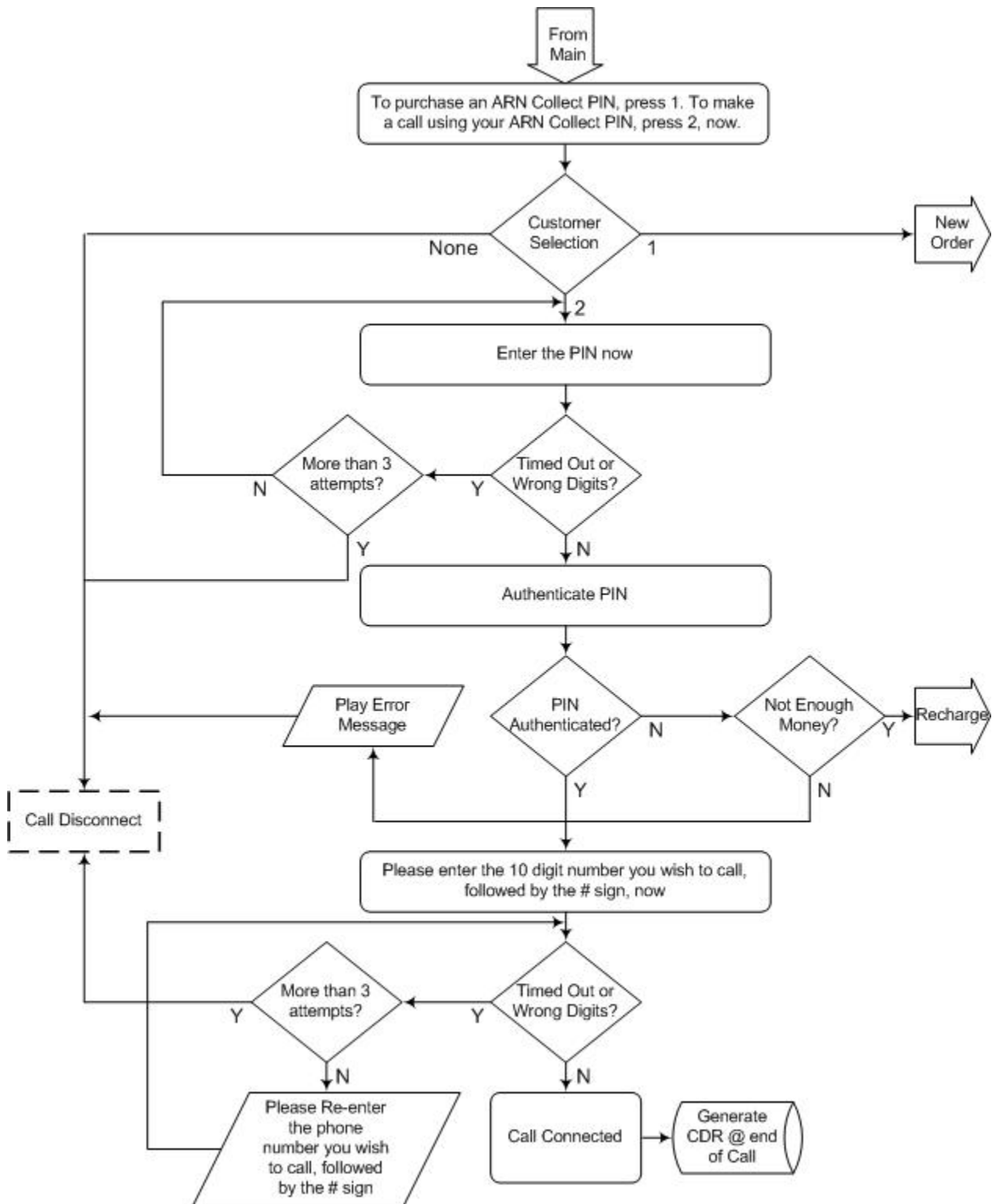
#### 3.1. Collect Landline or Cell (SMS)

Figure 3-1 Call Billed to a Landline Collect or Premium SMS (Cell)

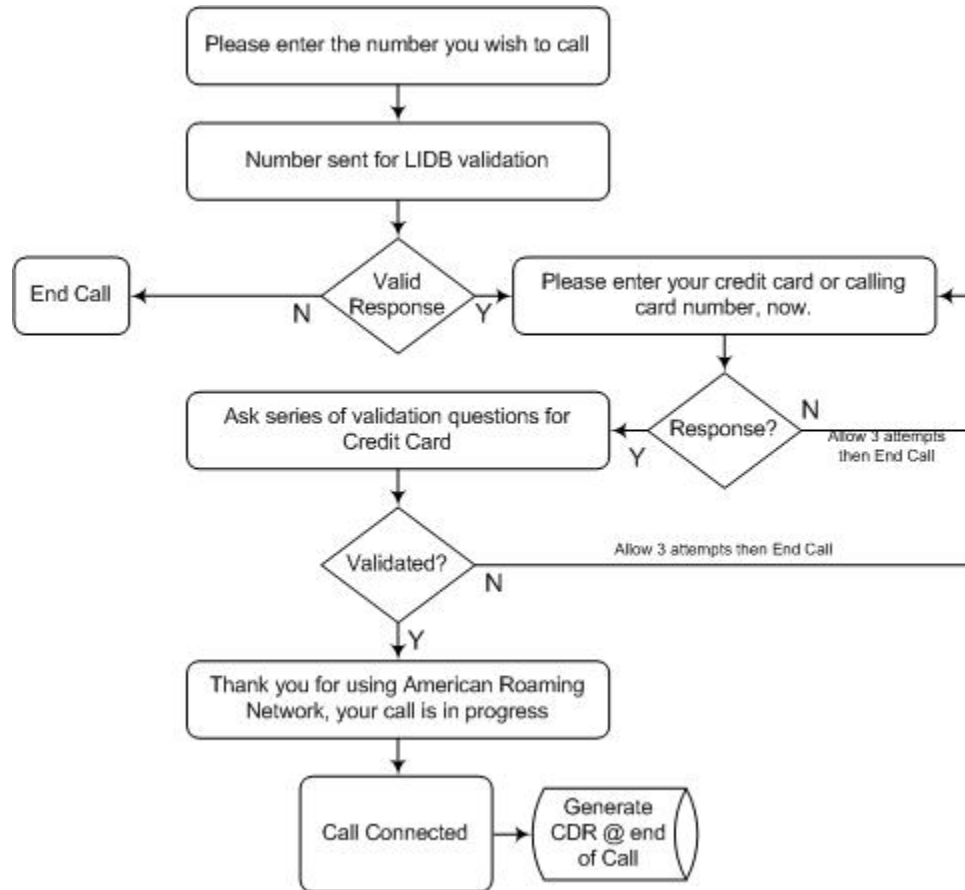




### 3.2. Collect PIN



### 3.3. US Credit Card per minute & Calling Card



## 3.4. Billing & Private IVR Branding

American Roaming Network can provide private and customized billing & IVR branding for Carriers that wish to provide these services seamlessly to customers. We have several custom and private brandings for our products in operations, today.

Example of Private Billing & IVR Branding for Roaming would be for the following applications;

- Collect Calls to Landline via ARN
- Collect Calls to Cell (SMS)
- Prepaid Mobile Roaming by ANI
- Unregistered Roaming provided by ARN, but branded with Carriers Name
- Customized and Automated Billing IVR Platforms – Purchase or Licensed

Please contact our Sales department @ 1-866-210-0380 for more information.