

Relay Services Interoperability: options and choices

CG Docket No. 03-123

May 22, 2007



Background

- FCC order & NPRM on VRS interoperability
 - Users should be able to use any relay provider
 - Should users be assigned NANP numbers?
 - Should there be a central database to link numbers & IP addresses?

- NANC request to INC
 - Take the lead in developing a technical response/recommendation regarding Internet-based Relay Services interoperability issue raised during the NANC meeting (INC Issue #510)
 - Report in development

Overview

- Industry agrees that
 - relay users should be assigned geographic NANP (POTS) numbers
 - POTS numbers should be portable between relay providers and Telecom carriers
 - direct assignment of number blocks to relay providers will waste resources
 - 911 should be accommodated and not harmed by solution
- Industry differs on
 - The nature of the central database that will support interoperability of call set-up to relay users
 - How relay users should obtain numbers
- Parties unsure how costs will be handled

Database Options Comparison:

Two ways to connect with video and IP relay users:

DDNS - Dynamic Domain Name Server

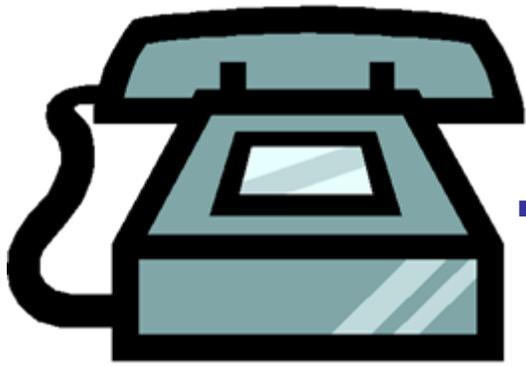
Vs.

NPAC - Number Portability Administration Center



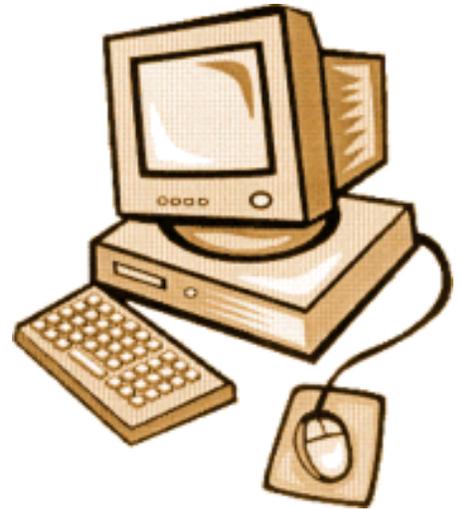
Problem:

Phone Number Conversion for Video and IP Relay



Phone Number

(Always the same)

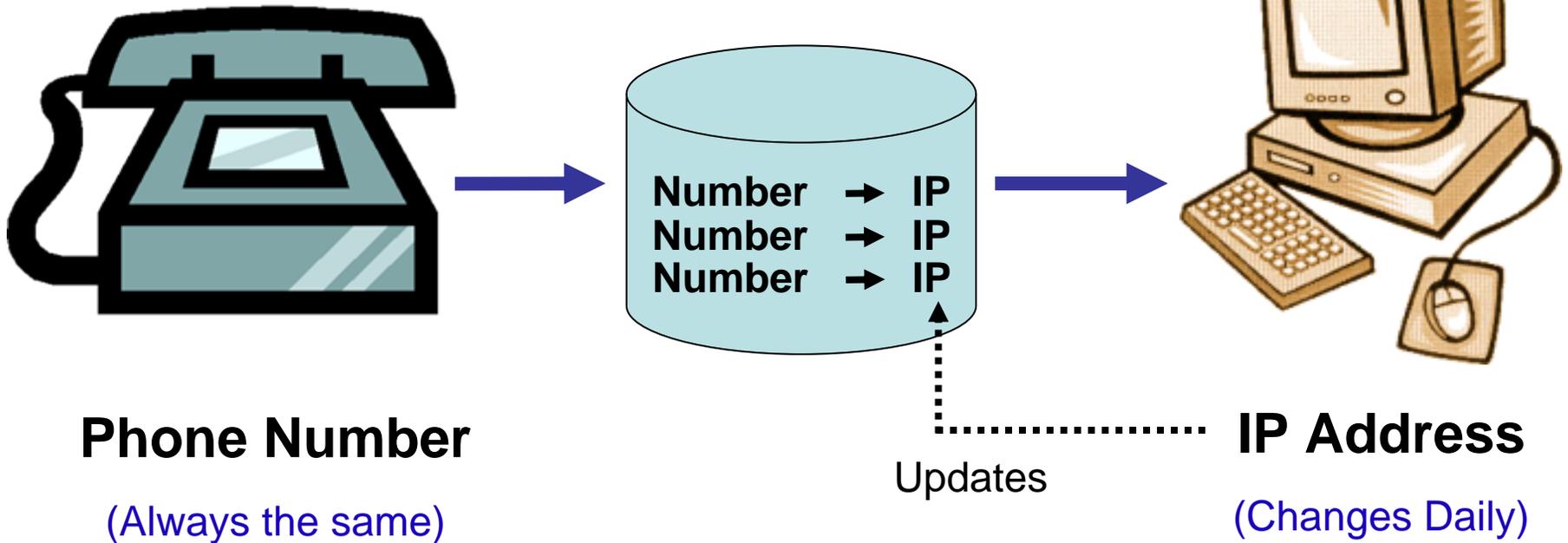


IP Address

(Changes Daily)

Solution:

Phone Number Database



Use Cases:

Direct Dialed



800 Number

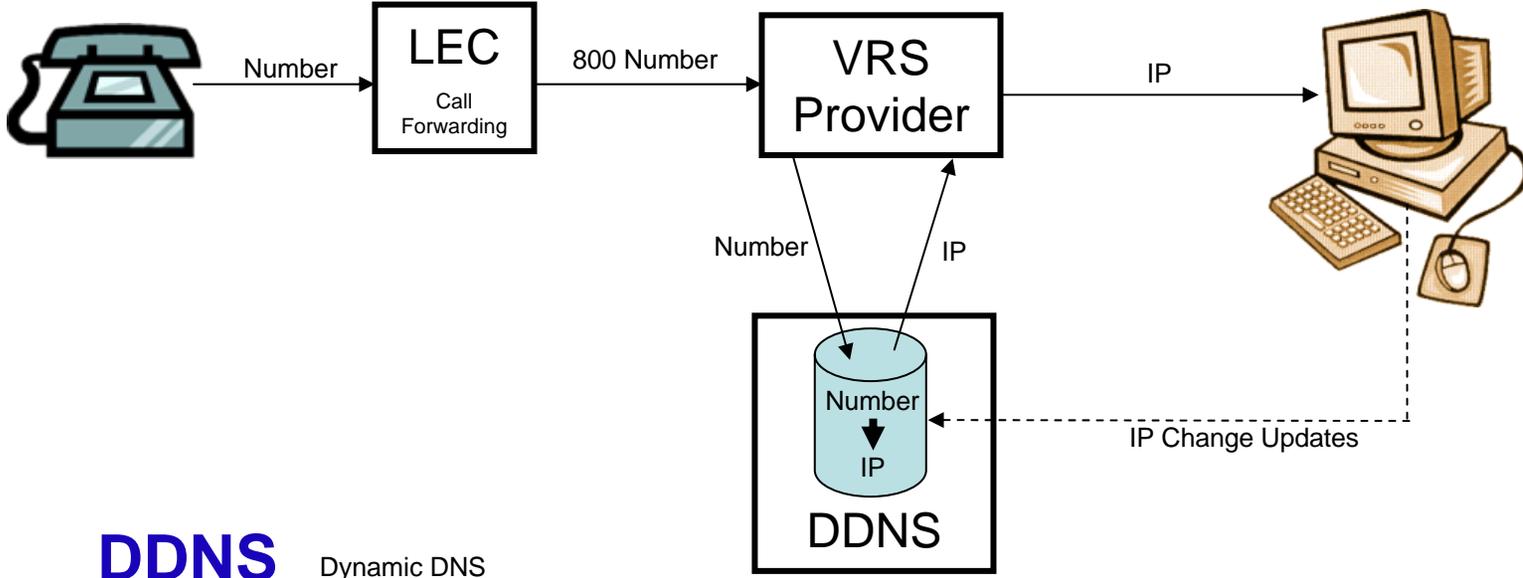


VRS Provider



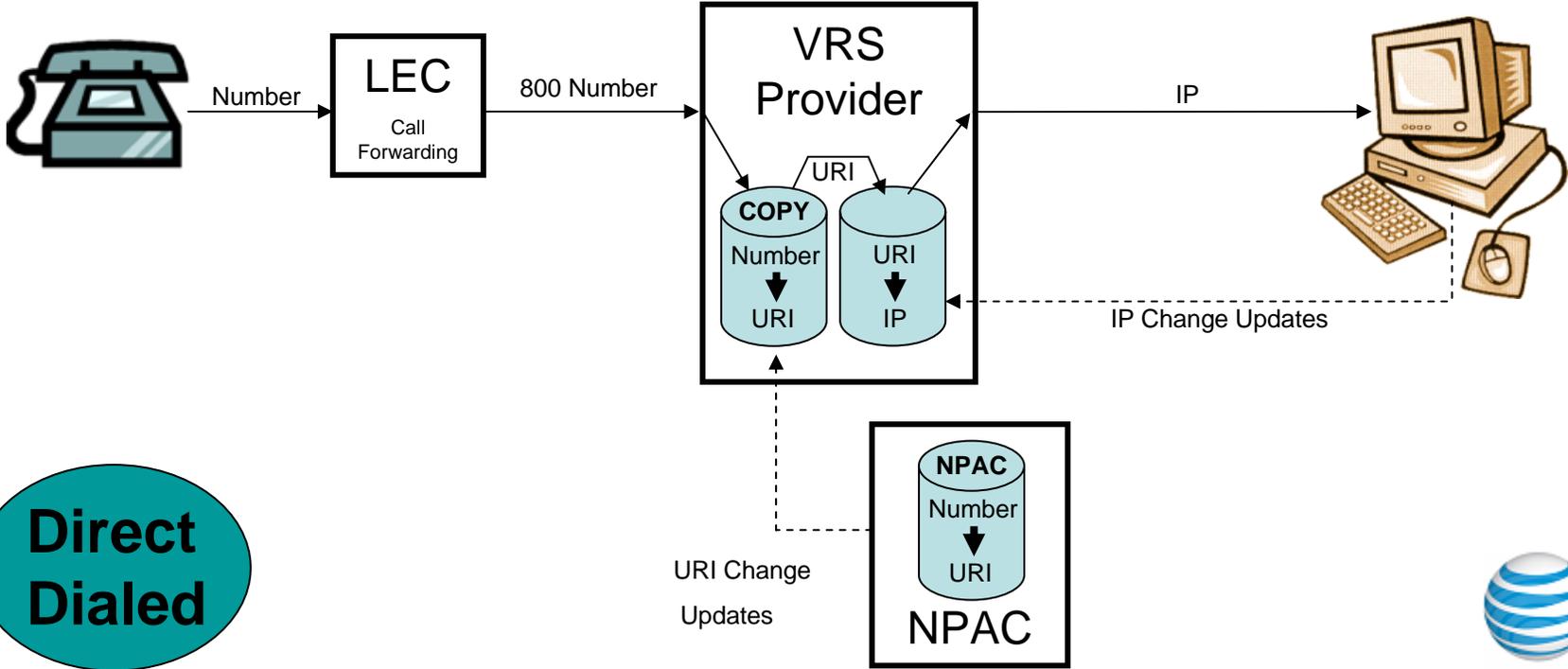
Peer to Peer





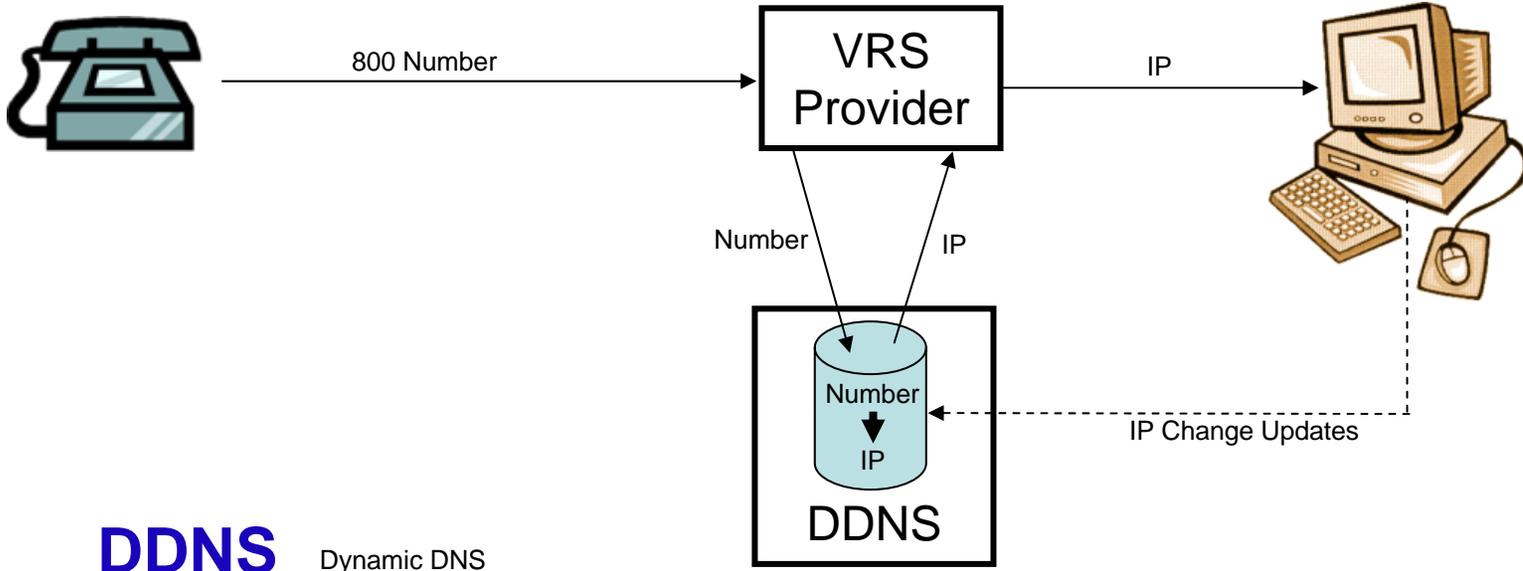
DDNS Dynamic DNS

NPAC Number Portability Administration Center



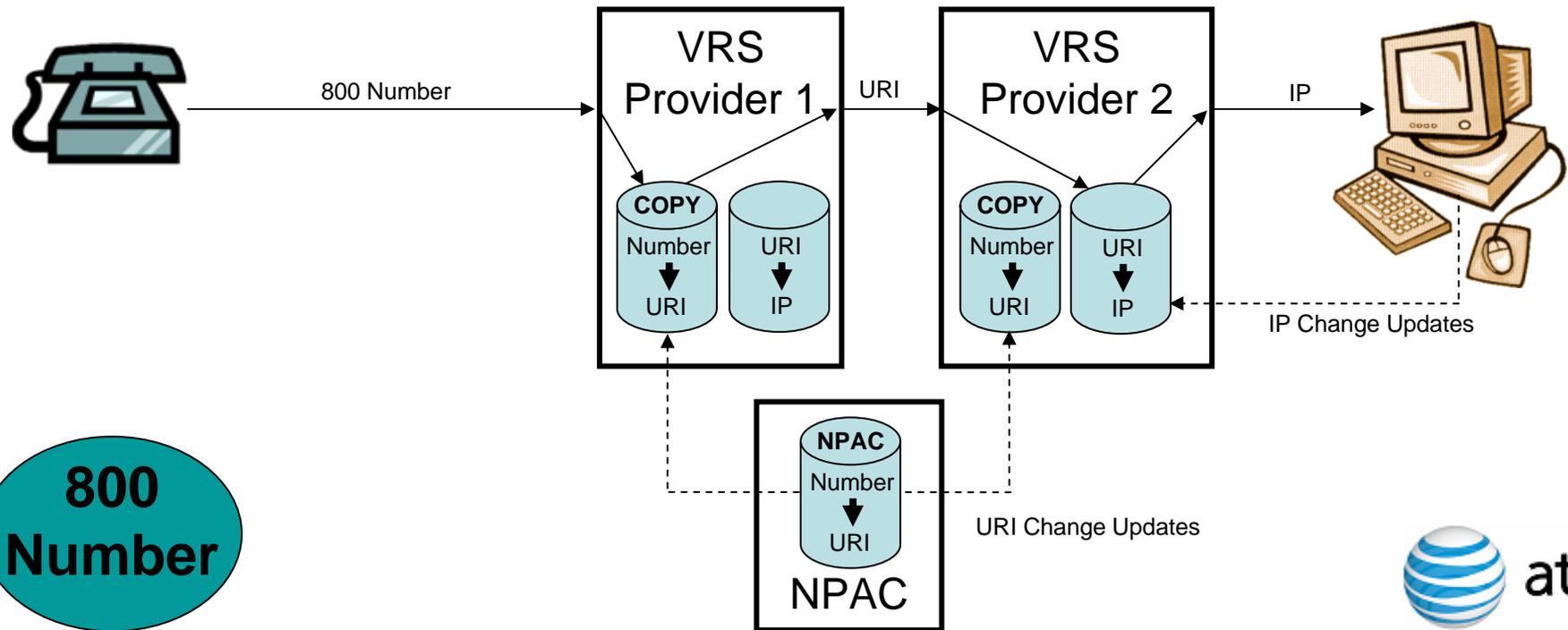
Direct Dialed





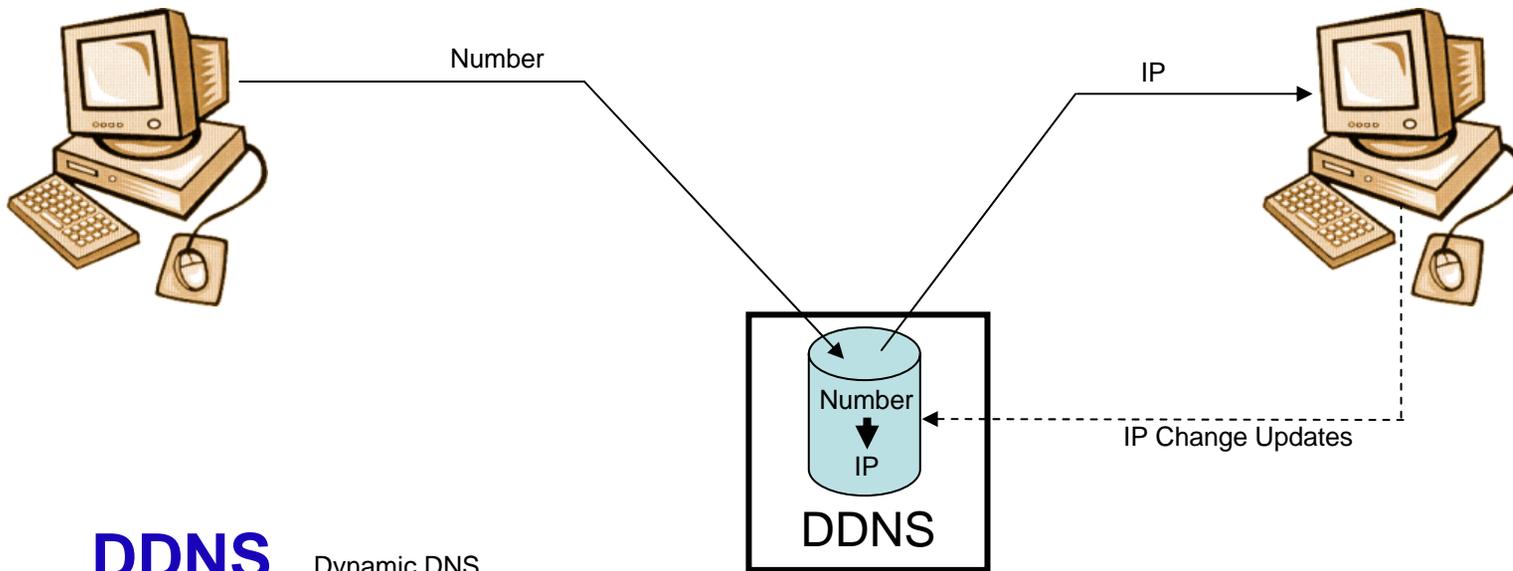
DDNS Dynamic DNS

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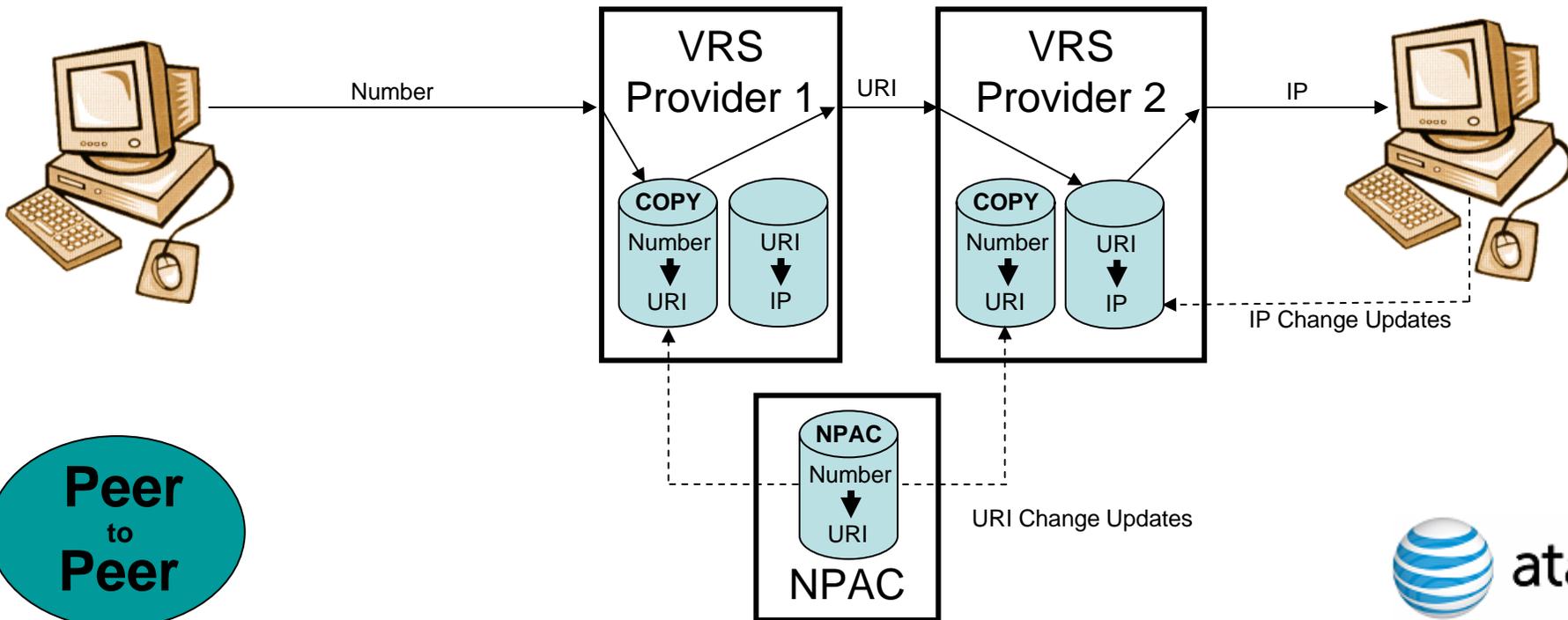
800 Number





DDNS Dynamic DNS

NPAC Number Portability Administration Center



Database Options – AT&T View

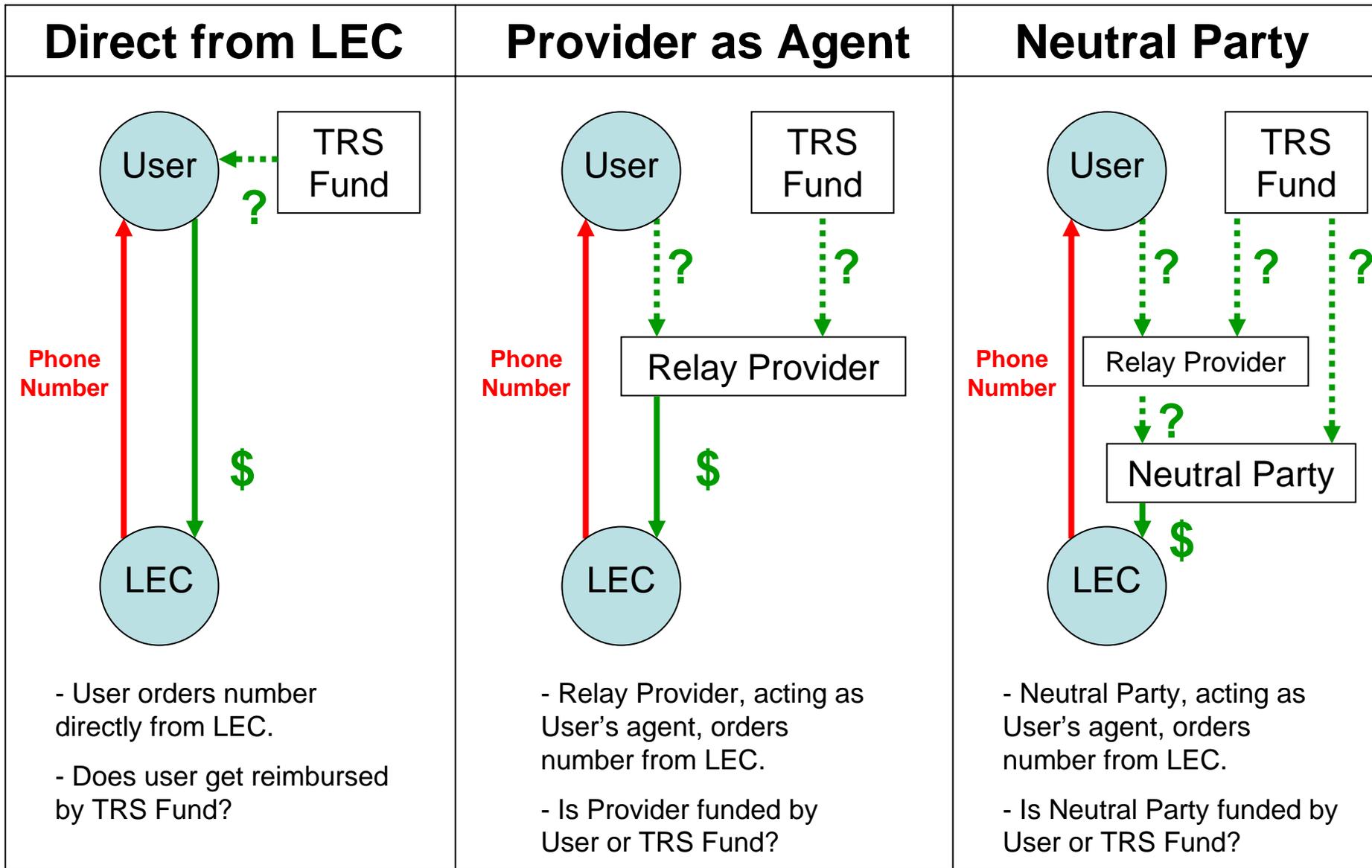
AT&T, other relay providers favor Dynamic DNS

- Proven technology for handling dynamic IP address allocation already incorporated in many PCs and home routers
- Requires only one relay provider on 800 dialed calls
- Does not involve relay providers in peer-to-peer calls
- Many parties already offer the capability, allowing for competitive procurement
- On the other hand the NPAC approach
 - requires call set up always go through a single provider, even where that provider does not supply the communications assistant
 - Does not make the user IP address available to all relay providers
 - Will add cost and complexity – don't assume implementation will be quicker

Relay Number Assignment

- Relay providers unlikely to take on the burdens of certification as LECs in each state to obtain numbers
 - Given that relay users will prefer local numbers and that there will be relatively few users in most rate centers, direct allocation of thousands blocks to relay providers does not make sense in any case
 - So... relay numbers will come out of existing LEC or other voice service provider (e.g., VoIP providers) inventories
- Several options for how relay users get numbers

Options for Phone Number Acquisition*



* Phone Number Acquisition is accomplished through purchase of local service



Users Obtain Numbers Directly

PROs

- Simplest and quickest to implement

CONs

- Requires more effort of relay users to set up service

Users Obtain Numbers from Neutral 3rd Party

PROs

- Simplifies set-up for relay users
- Simplifies for relay providers

CONs

- Delays implementation

911 & Relay Service

- NANC request to INC for POTS numbers was for inbound calling to relay user
- The POTS numbers obtained by relay users will also support 911 location capabilities
 - Where numbers are for wireline service in the user's rate center (i.e., LEC service) normal E911 location procedures apply
 - Where numbers are nomadic (obtained from VoIP providers) the VoIP E911 solution applies
- Use of POTS numbers by Relay users facilitates 911 callback