SIP Trunking in Latin America

Presented by:
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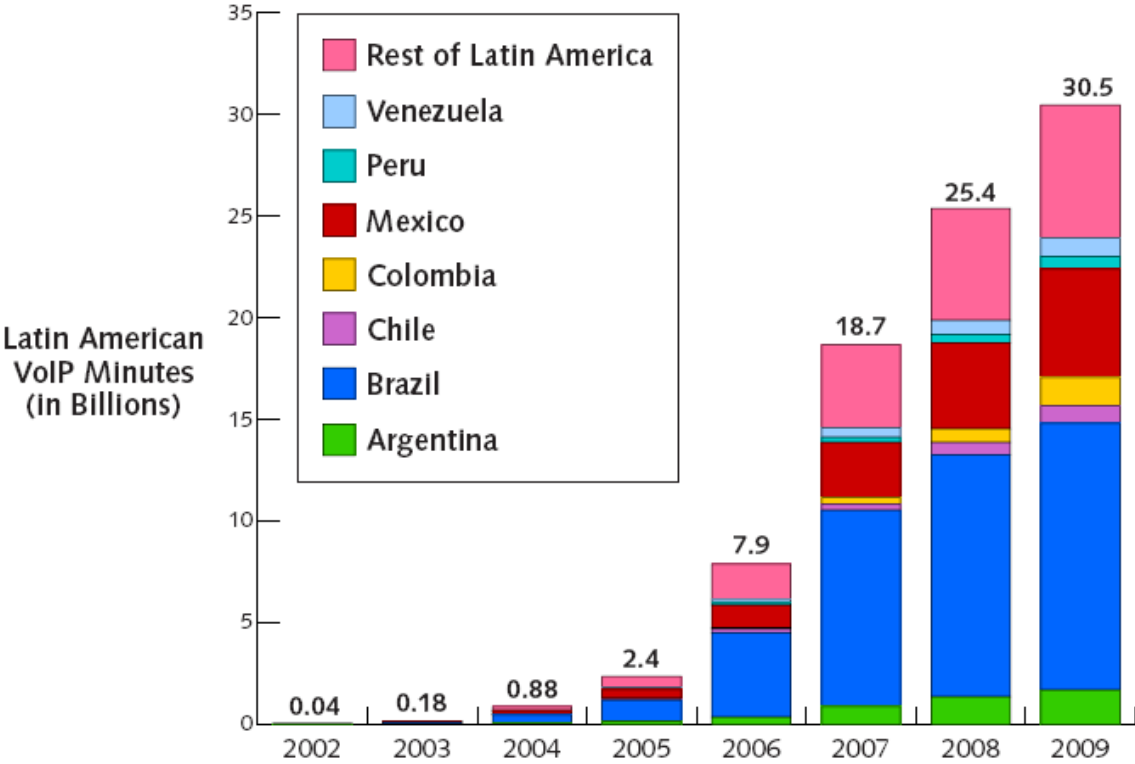Marketing Unit Brazil

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Latin America Market

- VoIP is a reality in Latin America
- VoIP is a driver to change traditional operators business models
- Opportunity for SME
- Different regulations

Latin America Market

Exhibit 1.
VoIP Traffic in Latin America
Source: Yankee Group, 2006

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VoIP – Type Services

- **PC to PC**
  Skype, MSN, Yahoo, etc...

- **Internet VoIP**
  UOL Fone, Terra VoIP, LIG in Brazil, etc..

- **Private VoIP**
  Embratel, Telefonica, Telemar, Transit, Tmais, etc...

- **Public VoIP ***
  Tmais, Transit, Vono GVT, Brasil Telecom VoipFone, etc…

* Source: Teleco www.teleco.com.br – Jan 2007

VoIP Operators in Latin America

Operator	Partner	Offer	Country
LatiNode	No	VoIP offers to consumers and SMBs	Argentina
Skype	Transit	Voice service to businesses and consumers; needs Transit to offer a fixed number to the end client	Brazil
	Looking for a partner in Argentina	Voice service to businesses and consumers; needs a partner to offer a fixed number to the end client	Argentina
Telemar	TVA	Voice service via TVA's network; allows Telemar to offer service out of its concession area	Brazil
Embratel	NET	Local voice services via NET's network; access to local markets	Brazil
Telefonica	No	Launched VoIP in 2006 as a way to promote its broadband services	Brazil
VTR	No	Triple-play offer (i.e., voice, TV and broadband)	Chile
EPM	Orbitel	Complete portfolio of voice, data and entertainment services both nationally and internationally	Colombia
ETB	Net2Phone	VoIP offers to broadband subscribers; focuses on the corporate market	Colombia
Cablemás	No	Launched VoIP in 2005 via its broadband network	Mexico
Protel i-Next	Vistula	VoIP offers to corporate market	Mexico

* Source: Yankee Group – Set 2006

VoIP Regulatory *

- **Argentina**
  - Legalized VoIP
  - Operator must hold a ULTS (Unique License for Telecommunications Services) from government
  - License cover all telecommunications services

- **Brazil**
  - Legalized VoIP
  - Two categories
    - Telecommunication service provider
    - Value-Added Service (VAS)
  - Does not have a specific regulation, follows Voice regulation
  - Anatel has divided the VoIP into three product classes:
    - Class I—VoIP supplied via the internet with software installed on a PC
    - Class II—Restricted (private) VoIP (VoIP supplied via corporate network)
    - Class III—Voice service (VoIP)

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VoIP Regulatory*

Chile
- Legalized VoIP
- Only long-distance can provide VoIP
- Subtel is considering options for licensing IP Telephony (IPT) operators

Colombia
- Regulation does not provide a favorable environment for VoIP operators
- Operator must hold a long-distance concession
- PC to PC and Corporate private network can be provided
- Auguts 2007, the long-distance market will be opened

Mexico
- Legalized VoIP
- Telecommunication service requiring a license

* Source: Yankee Group – Set 2006

Certifications

- **Brazil Regulator Anatel request:**
    - All telecommunications equipments should be certified and homologated by Anatel
    - There are specific regulations for each type of equipment
    - Up to now, Anatel is using the International protocols, without any modifications

    www.anatel.gov.br

- **Different Vendors equipments**
    - Verify the vendor´s technical informations
    - In some cases interoperability tests should be needed

Brazil Regulator Anatel

Brazilian market information

http://www.teleco.com.br/voip.asp

Estatísticas

A lista de operadoras VoIP do Teleco (**www.teleco.com.br/opvoip.asp**) apresenta os prestadores de serviços VoIP classificados por tipo de atuação no mercado brasileiro, conforme a tabela abaixo:

Classificação	Total de Operadoras
Provedores de Telefonia Fixa VoIP	15
Provedores de Telefonia Fixa VoIP no Exterior	8
Serviços VoIP	51

A maior operadora de serviços VoIP é a Embratel/Net, com 115.000 assinantes (3T06), e as outras operadoras apresentam um número incipiente de assinantes.

Regulamentação

A Anatel, assim como a maioria dos órgãos regulatórios no mundo, procura regular os serviços de telecomunicações e não as tecnologias usadas para implementá-los. As tecnologias VoIP servem como meio e não como fim para os serviços de telefonia. Não existe ainda uma regulamentação específica para VoIP no Brasil.
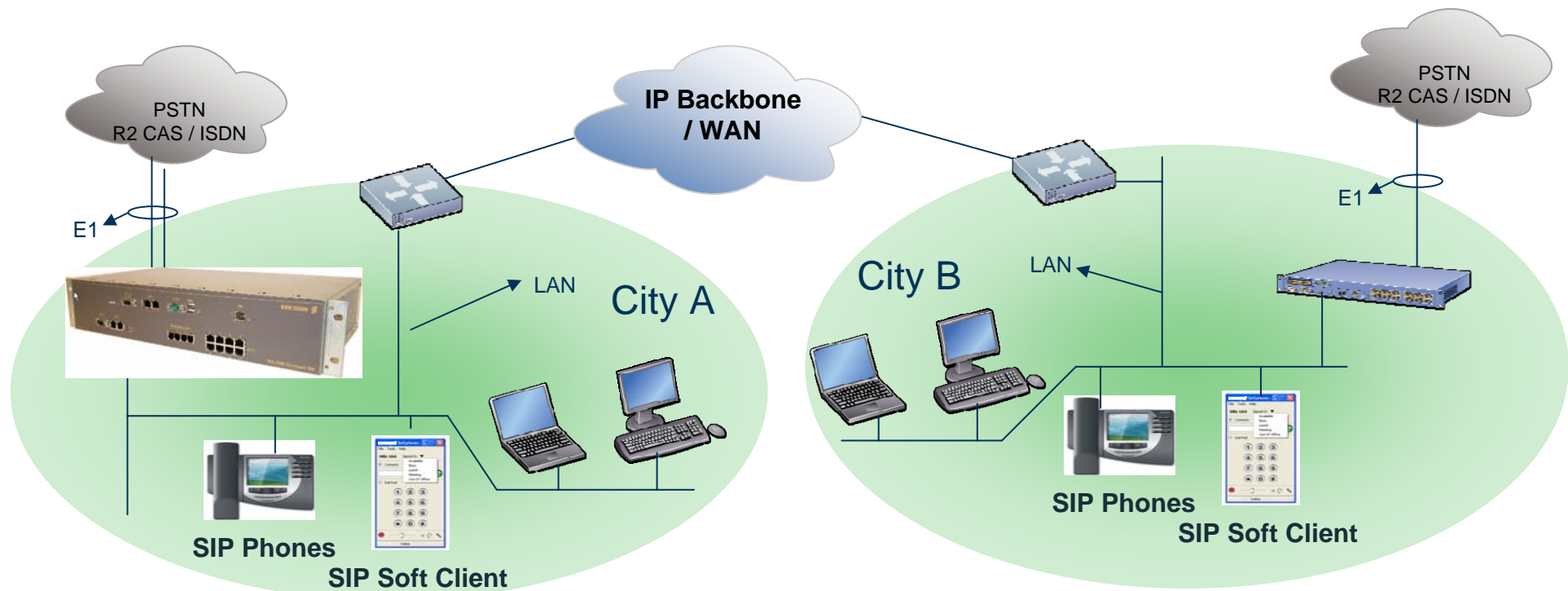
🌐 Internet

Traditional PBX – Scenario

- Two different paralell networks – Voice and Data

- 64 Kbps for each call, end to end

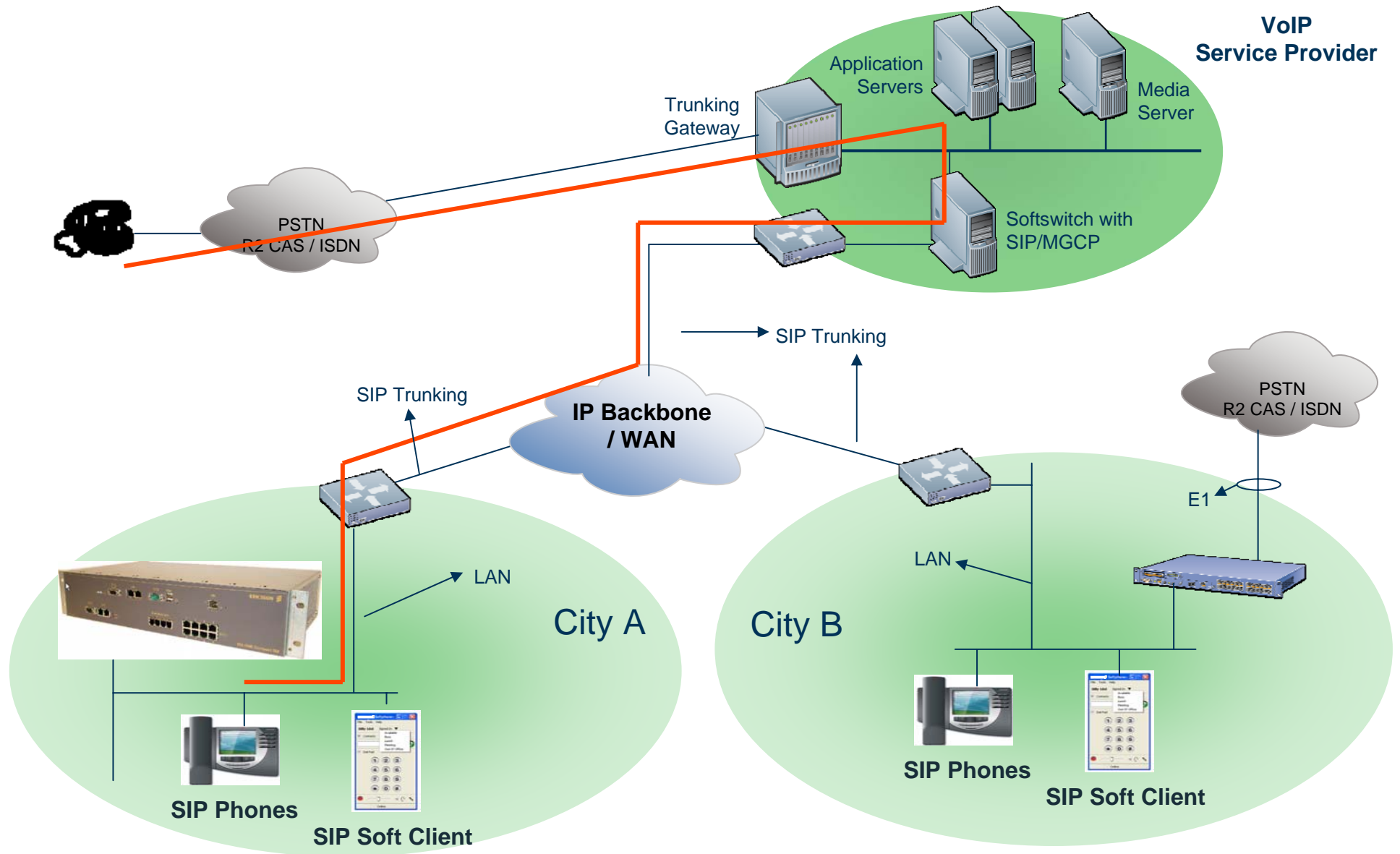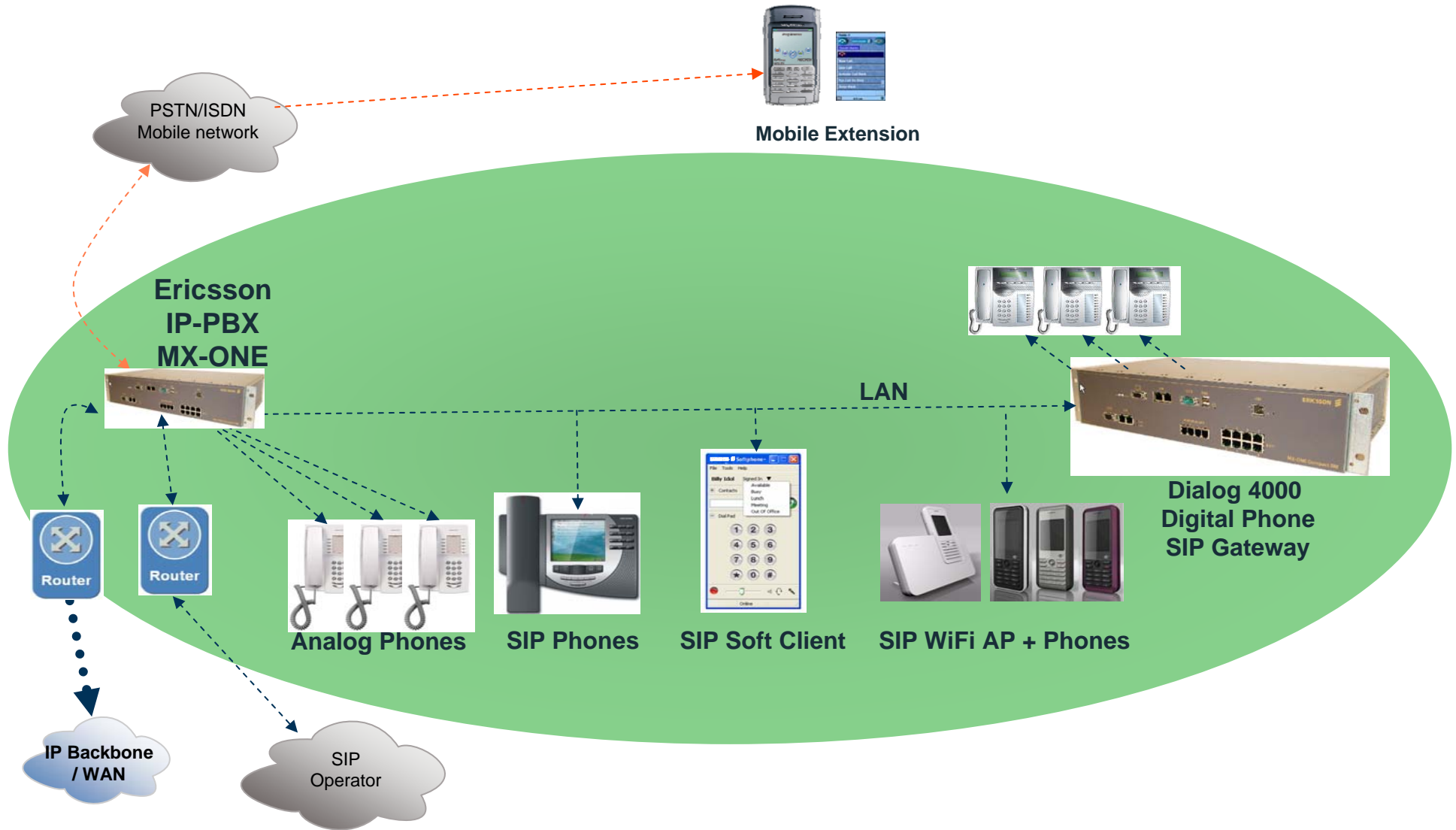- Operator normally have separately last mile for Voice and Data
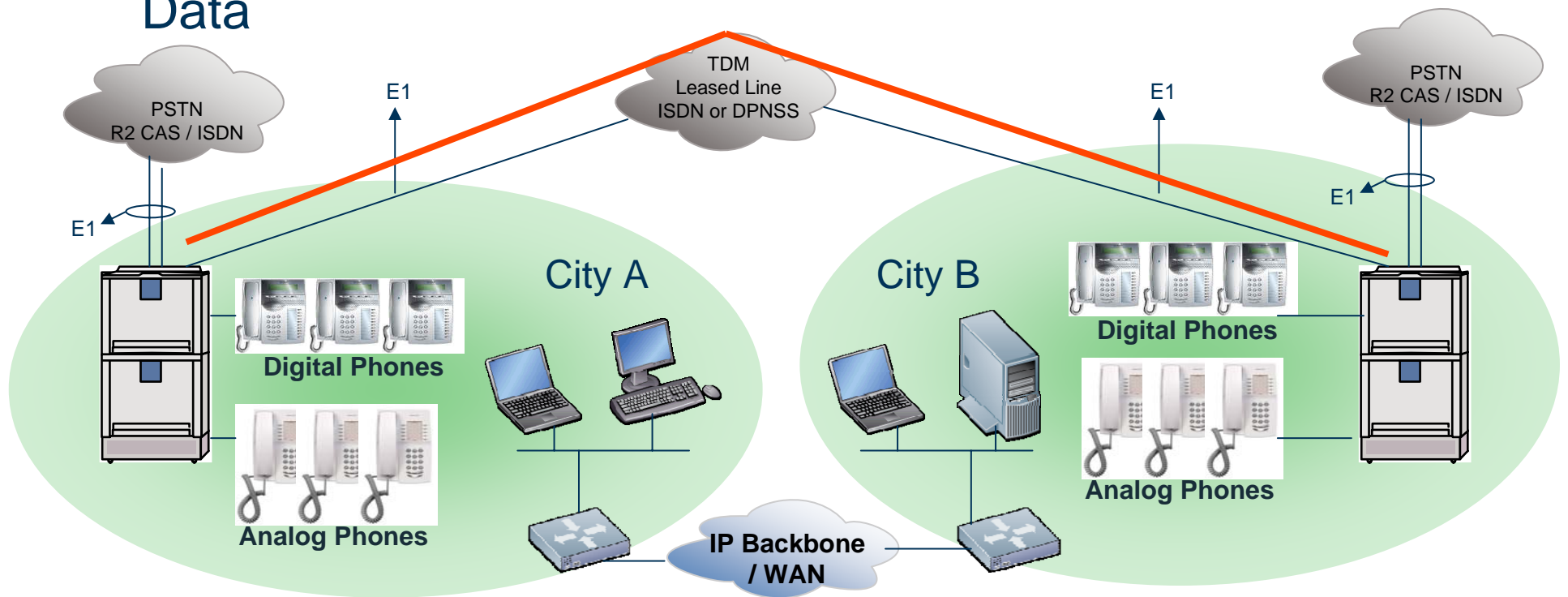
IP-PBX - Scenario

- One network for Voice and Data
- Bandwidth depends of codec type
- Operator can use the same last mile for Voice and Data

IP-PBX - Scenario

VoIP Service Provider

Application Servers

Media Server

Trunking Gateway

Softswitch with SIP/MGCP

PSTN R2 CAS / ISDN

SIP Trunking

IP Backbone / WAN

SIP Trunking

SIP Trunking

PSTN R2 CAS / ISDN

E1

LAN

LAN

City A

City B

SIP Phones

SIP Soft Client

SIP Phones

SIP Soft Client

IP-PBX - Scenario

Mobile Extension

Ericsson IP-PBX MX-ONE

LAN

Dialog 4000 Digital Phone SIP Gateway

PSTN/ISDN Mobile network

IP Backbone / WAN

SIP Operator

Analog Phones   **SIP Phones**   **SIP Soft Client**   **SIP WiFi AP + Phones**

Router   Router

Public VoIP
Legacy PBX

VoIP Service Provider

Application Servers

Media Server

Trunking Gateway

Softswitch with SIP/MGCP

PSTN

IP Network

PSTN Phones

FXO to PSTN

SIP Trunking

E1

Media Gateway

Legacy PBX

POTS, T1/E1/ISDN

PCs and Servers

POTS/FXS Phones

Fax

Private VoIP
IP-PBX with Branch Office

PSTN

IP Network

PSTN

VPN for voice and data

Main Office

IP-PBX

PCs and Servers

PoE SIP
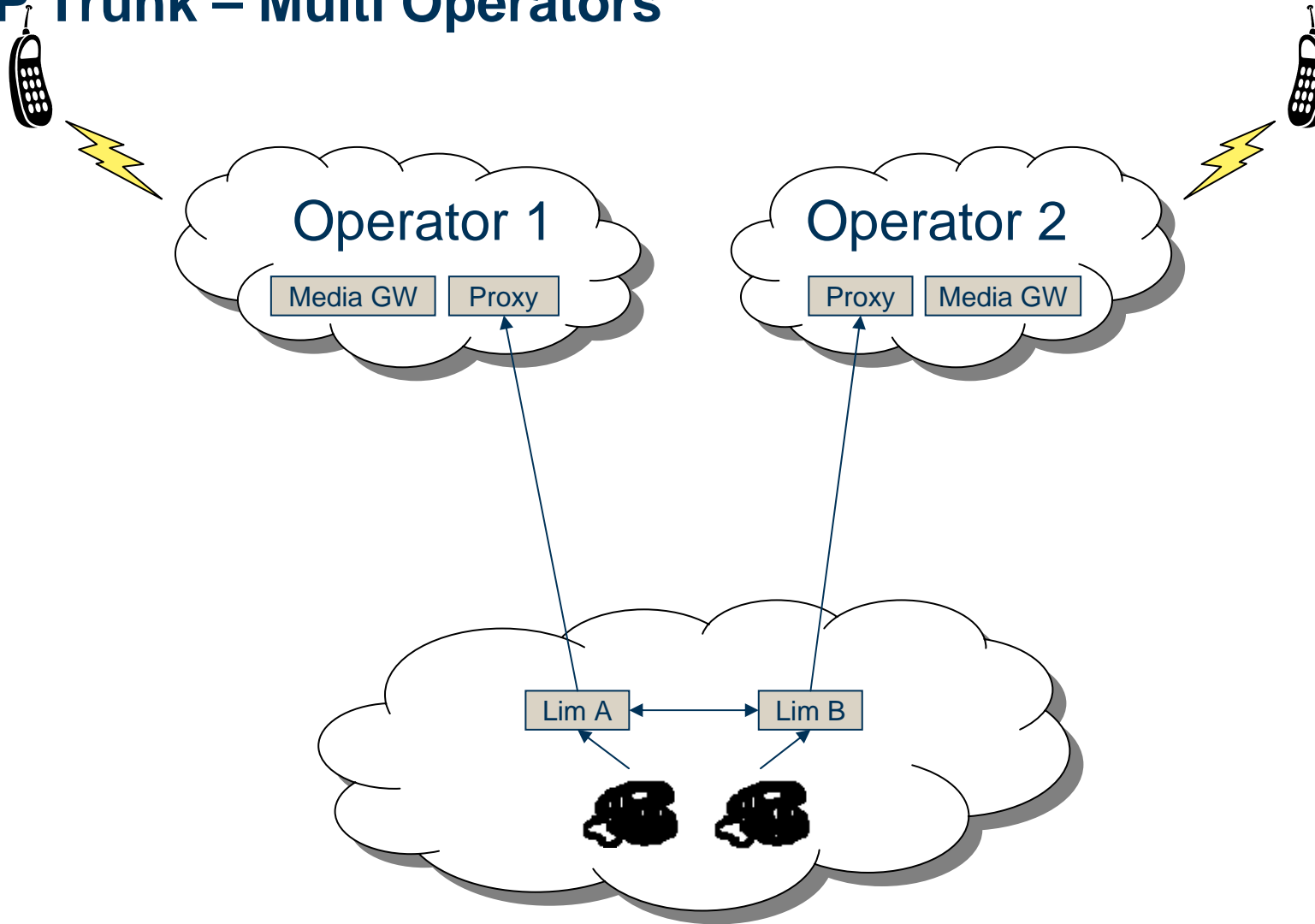IP Phones
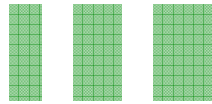
PCs and Servers

PoE SIP
IP Phones

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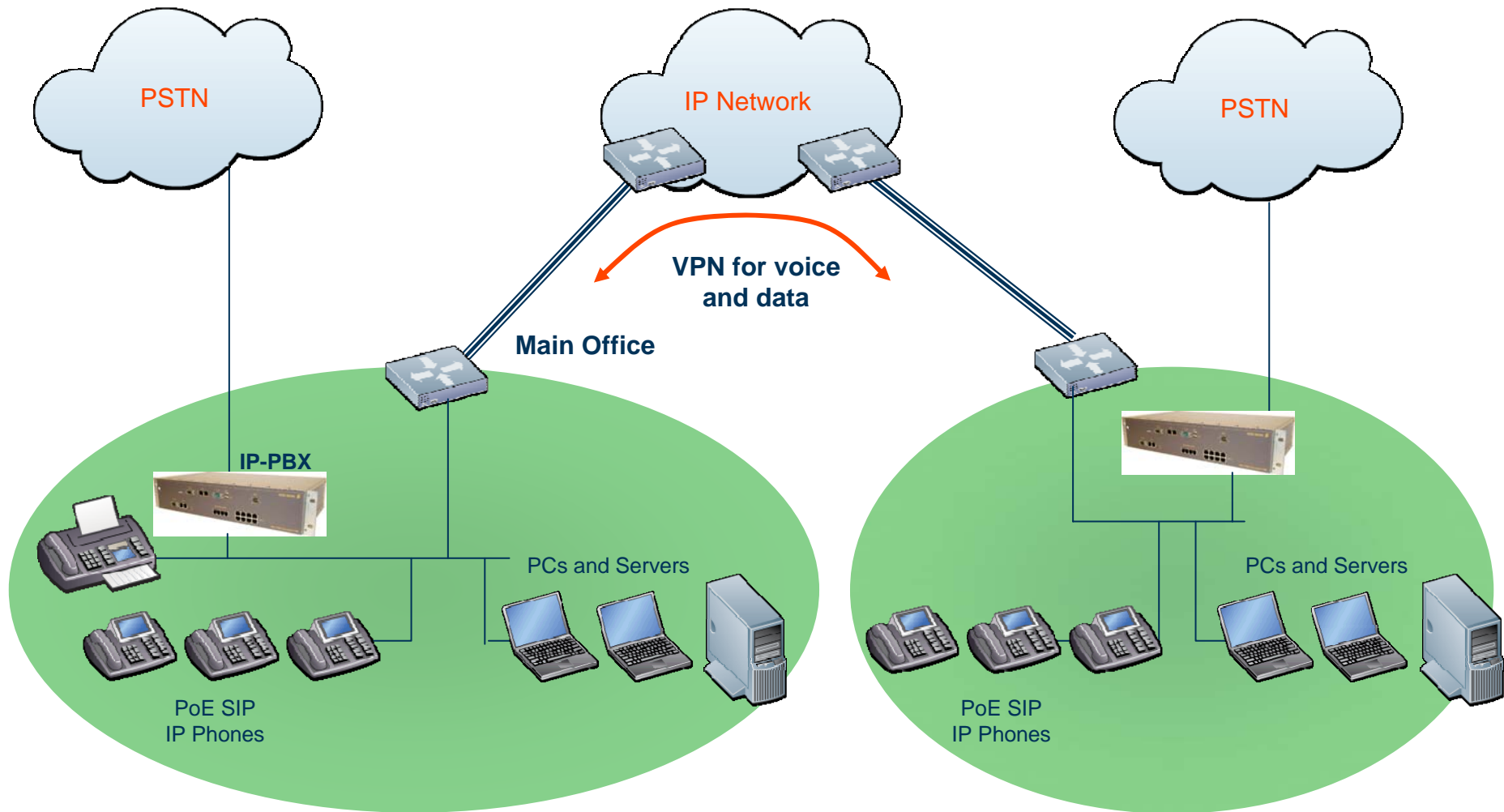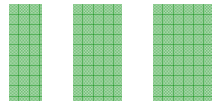
MX-ONE™ V.3
SIP Trunk –Normal Trunking
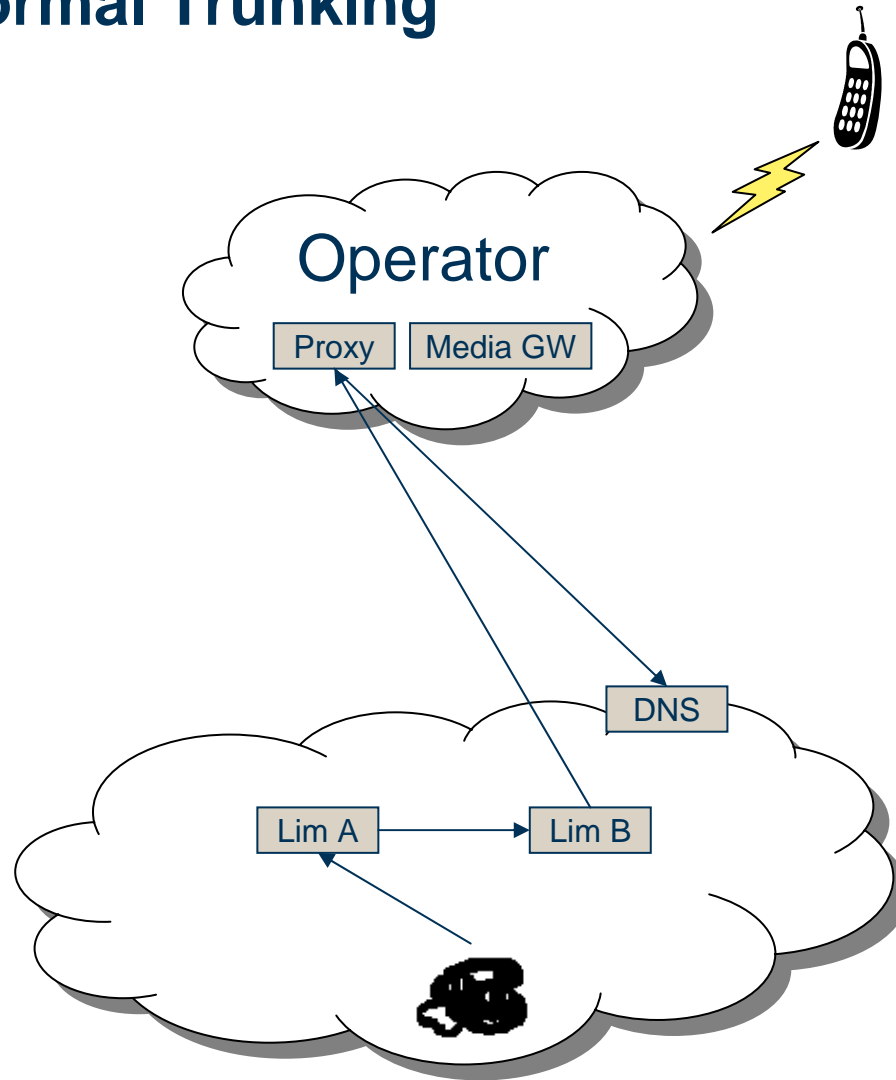
MX-ONE™ V.3
SIP Trunk – Multi Operators

MX-ONE™ V.3
SIP Trunk –Single External Number

Operator

Proxy | Media GW

Lim A
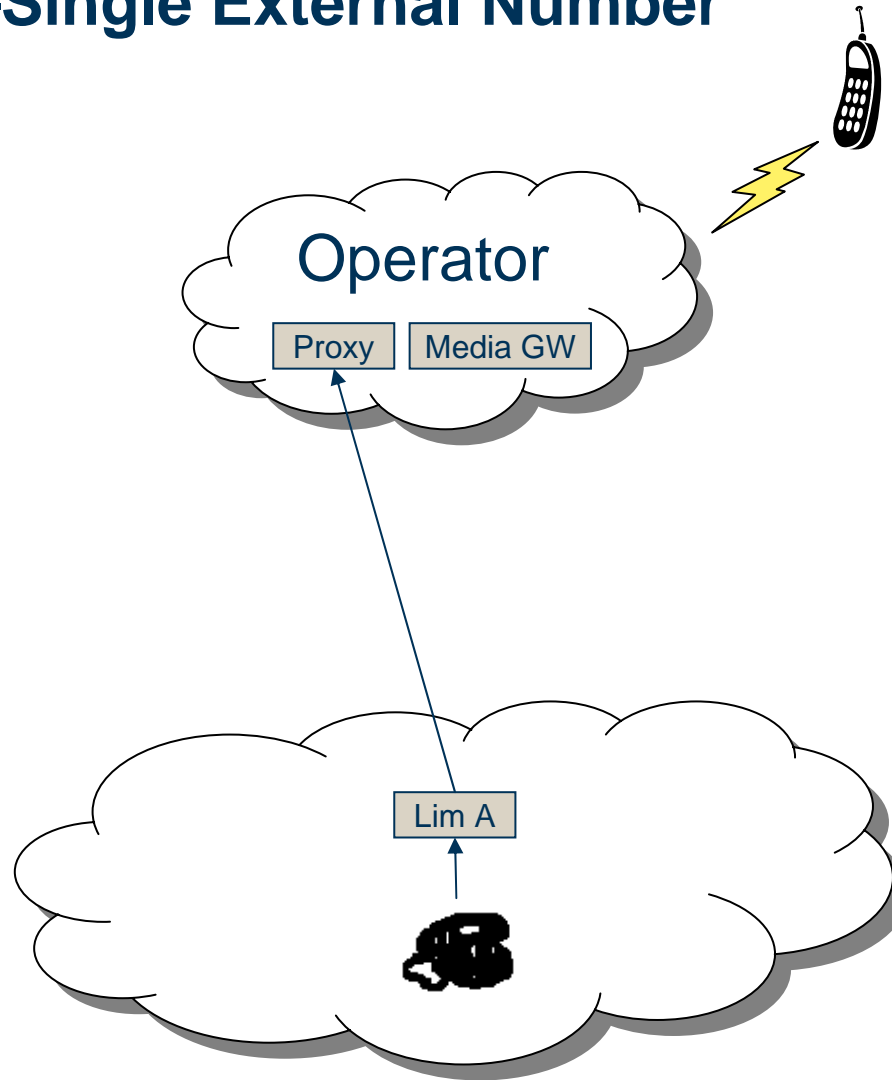
Conclusion

There are opportunities in Latin America for:

VoIP operators

Traditional operators

SME

Large Enterprises

Telecommunications Vendors

Thank you !

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