



SIP Trunking in Latin America

*Presented by:
Osvaldo Campos, Technical Manager
Marketing Unit Brazil*

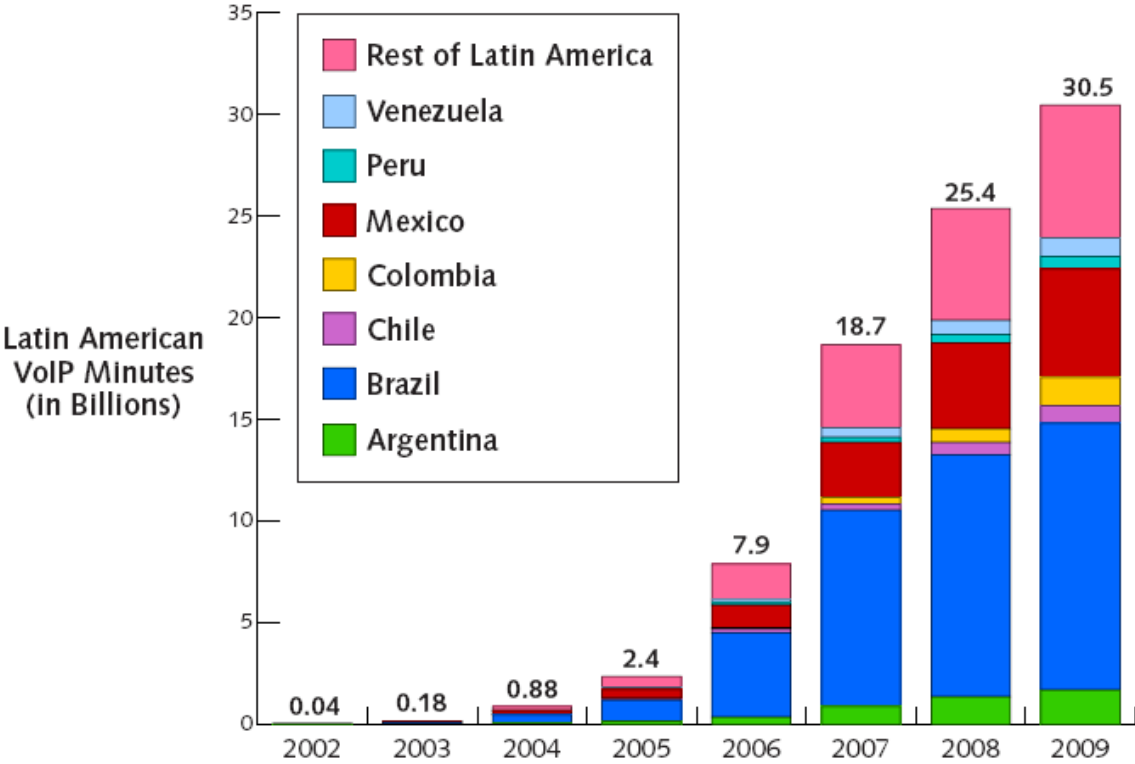
Latin America Market

- 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



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)

* Source: Yankee Group – Set 2006

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

The screenshot shows the Anatel website interface. At the top, there is a search bar with the text 'PESQUISA DE DOCUMENTOS' and a search button. Below the search bar, there are navigation links: 'CONHEÇA A ANATEL', 'BIBLIOTECA', 'FALE CONOSCO', 'SISTEMAS', 'AJUDA', 'MAPA DO SITE', and 'LINKS'. The main content area is titled 'Certificação' and features a large image of a hand holding a white telephone handset. Below the image, the text reads 'Certificação de Produtos' and 'Requisitos Técnicos para Certificação'. A paragraph explains that technical requirements and test procedures for telecommunications products are available, and users should check for updates. To the right of the main content, there are several sidebar sections: 'INDICADORES', 'COMITÊS', 'COMISSÕES/CBCs', 'ACONTECE NA ANATEL', 'NOTÍCIAS - CERTIFICAÇÃO' (with two news items dated 1/8/2006 and 27/4/2006), and 'SISTEMAS INTERATIVOS CERTIFICAÇÃO' (listing PDFF, SDT, SGCH, and SACP systems).

Address: <http://www.anatel.gov.br/Certificacao/requisitos.asp?CodTopico=1645&CodArea=5&CodTemplate=5&CodTopicoFim=1>

Ministério das Comunicações

ANATEL

PESQUISA DE DOCUMENTOS Palavra-chave: Digite palavra-chave Tipo de Documento: Escolha_aqui OK >

Busca avançada

TELEFONIA FIXA

COMUNICAÇÃO MÓVEL

COMUNICAÇÃO MULTIMÍDIA

RADIODIFUSÃO

TV POR ASSINATURA

RÁDIO DO CIDADÃO

RADIOAMADOR

RADIOFREQUÊNCIA

UNIVERSALIZAÇÃO

CERTIFICAÇÃO DE PRODUTOS

Legislação

Relação dos OCD

Relação dos Laboratórios

Fórum de Certificação

Lista de Referência de Produtos para Telecomunicações por Categoria

Instrumentos de Gestão

Lista dos Equipamentos

Certificação

Certificação de Produtos

Requisitos Técnicos para Certificação

As Listas de Requisitos Técnicos e Procedimentos de ensaios aplicáveis aos produtos de telecomunicações de categorias I, II e III devem ser consideradas como referência e estarão sujeitas a atualizações, sempre que necessário. Recomendamos verificar a data da última atualização constante do documento.

» REQUISITOS TÉCNICOS PARA CERTIFICAÇÃO

- Categoria III
- Categoria II
- Categoria I

INDICADORES

COMITÊS

COMISSÕES/CBCs

ACONTECE NA ANATEL

NOTÍCIAS - CERTIFICAÇÃO

Regra de certificação tem novos requisitos de compatibilidade
1/8/2006

Designação amplia empresas certificadoras de telecom
27/4/2006

» mais notícias

SISTEMAS INTERATIVOS CERTIFICAÇÃO

PDFF- Plano de Destinação de Faixas de Frequências

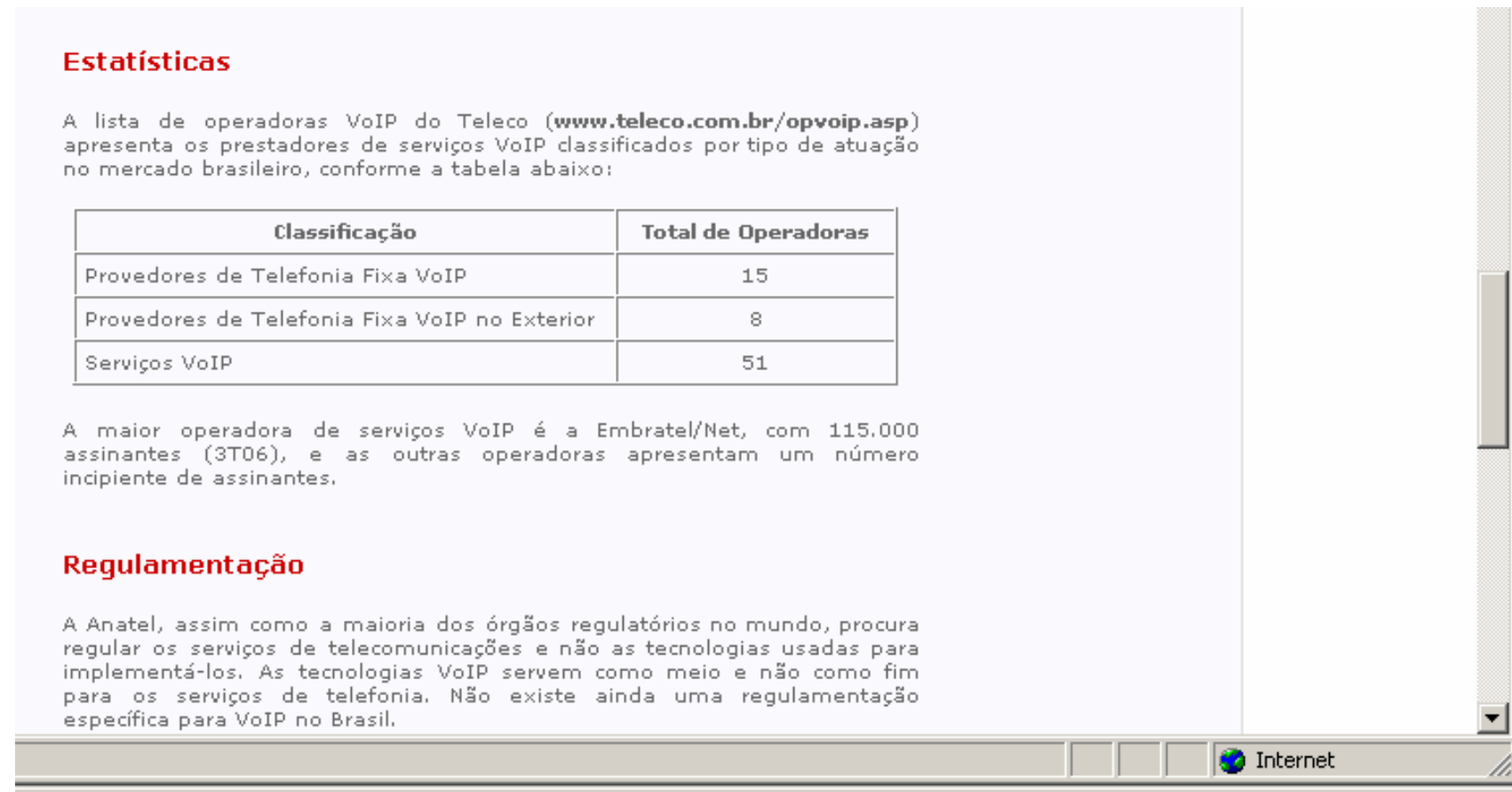
SDT- Sistema de Documentação Telebrás

SGCH- Sistema de Gestão de Certificação e Homologação - produtos homologados pela resolução nº 242

SACP- Acompanhamento de Consulta Pública

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.

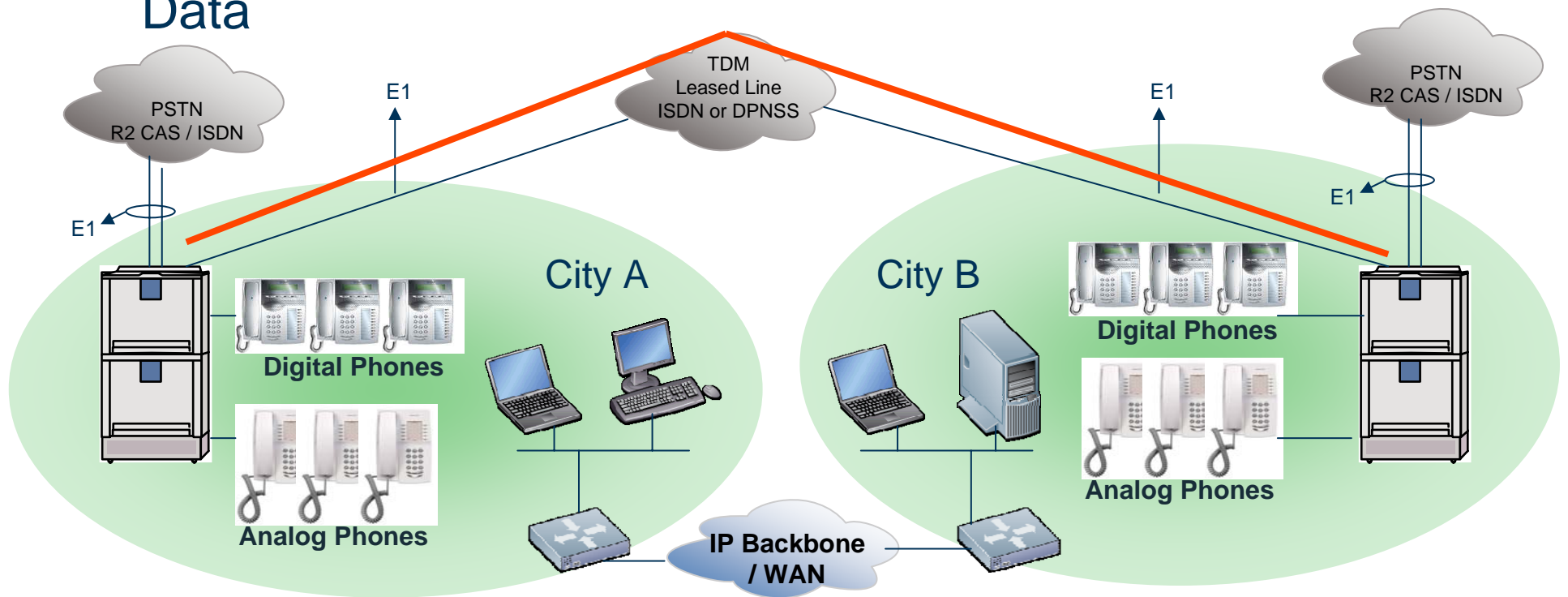
Regulamentação

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

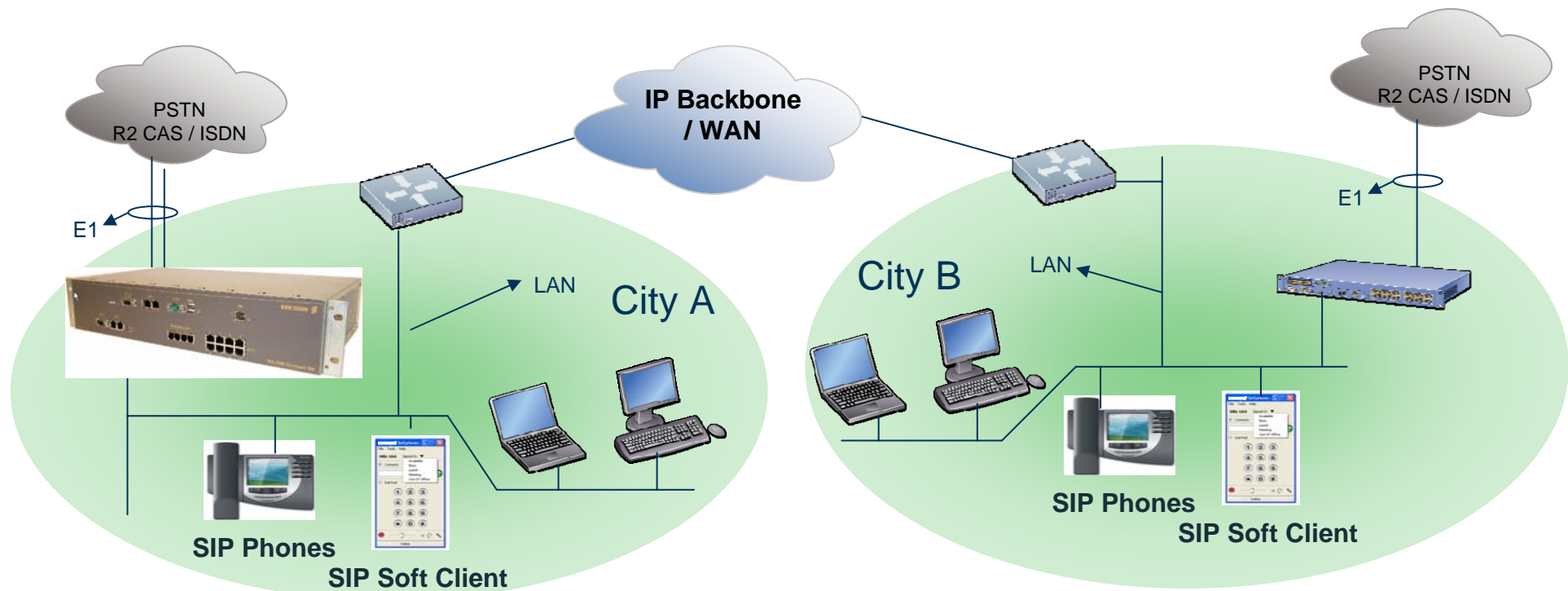
Traditional PBX – Scenario

- Two different parallel networks – Voice and Data
- 64 Kbps for each call, end to end
- Operator normally have separately last mile for Voice and Data

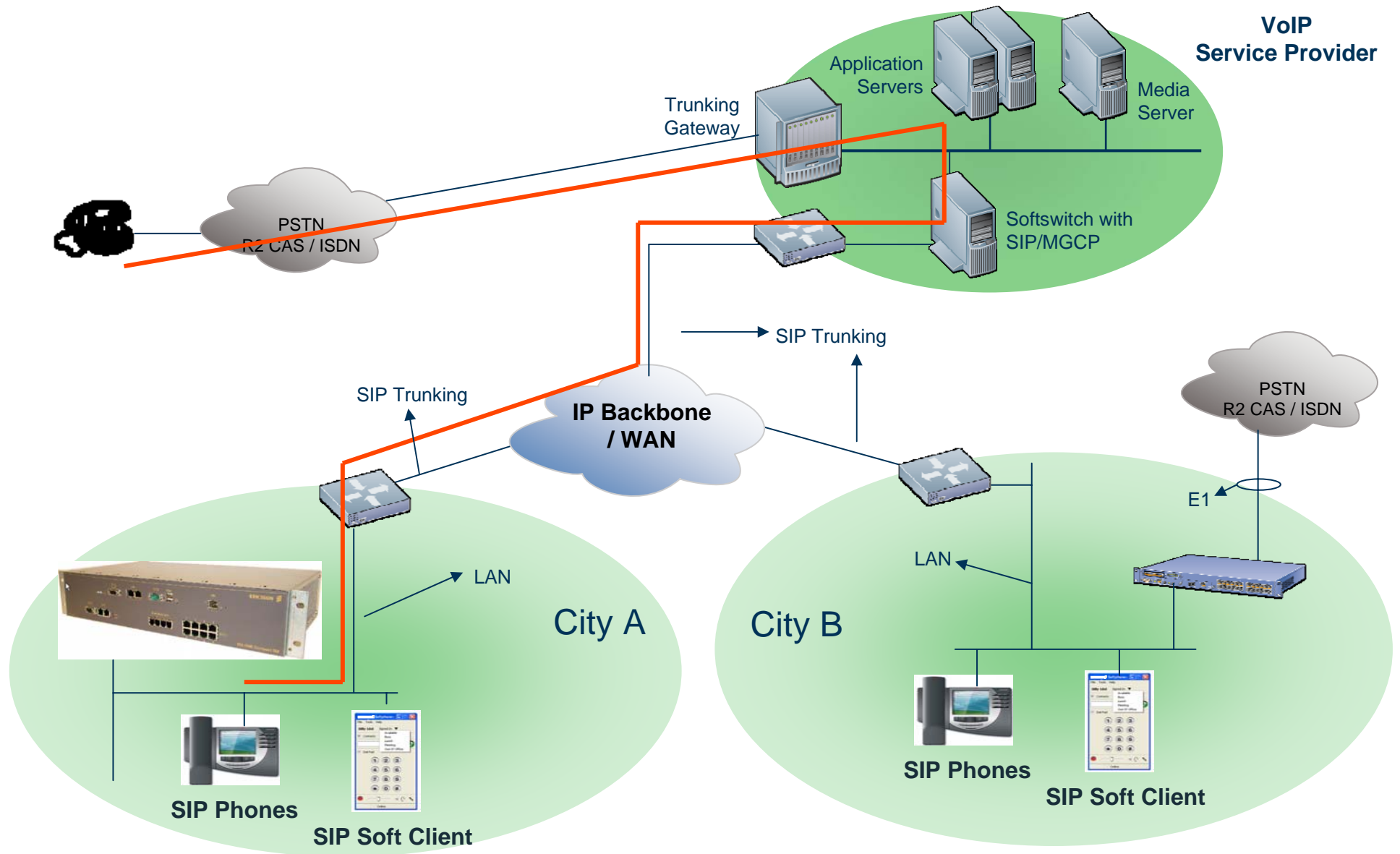


IP-PBX - Scenario

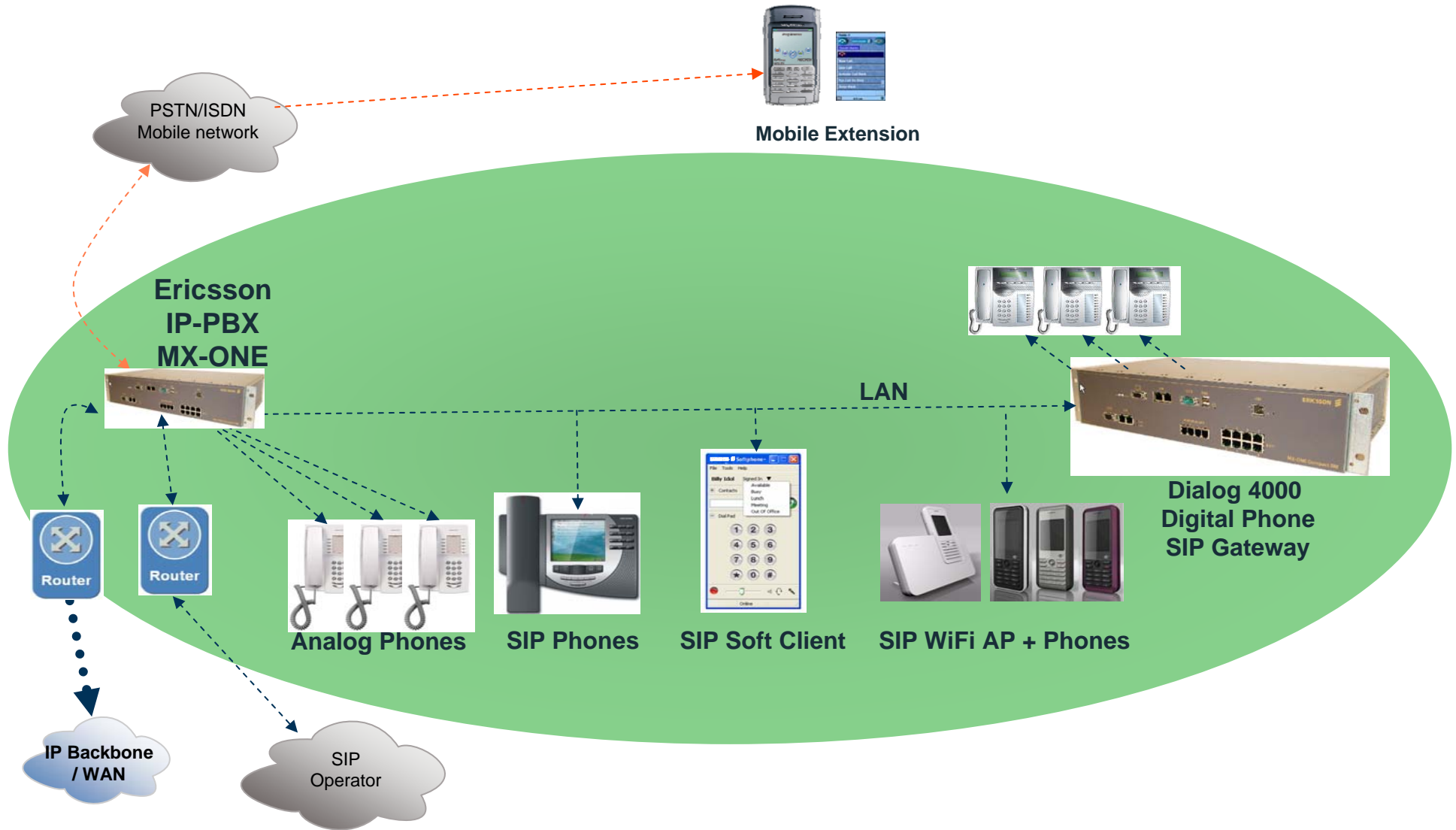
- One network for Voice and Data
- Bandwidth depends of codec type
- Operator can use the same last mile for Voice and Data



IP-PBX - Scenario

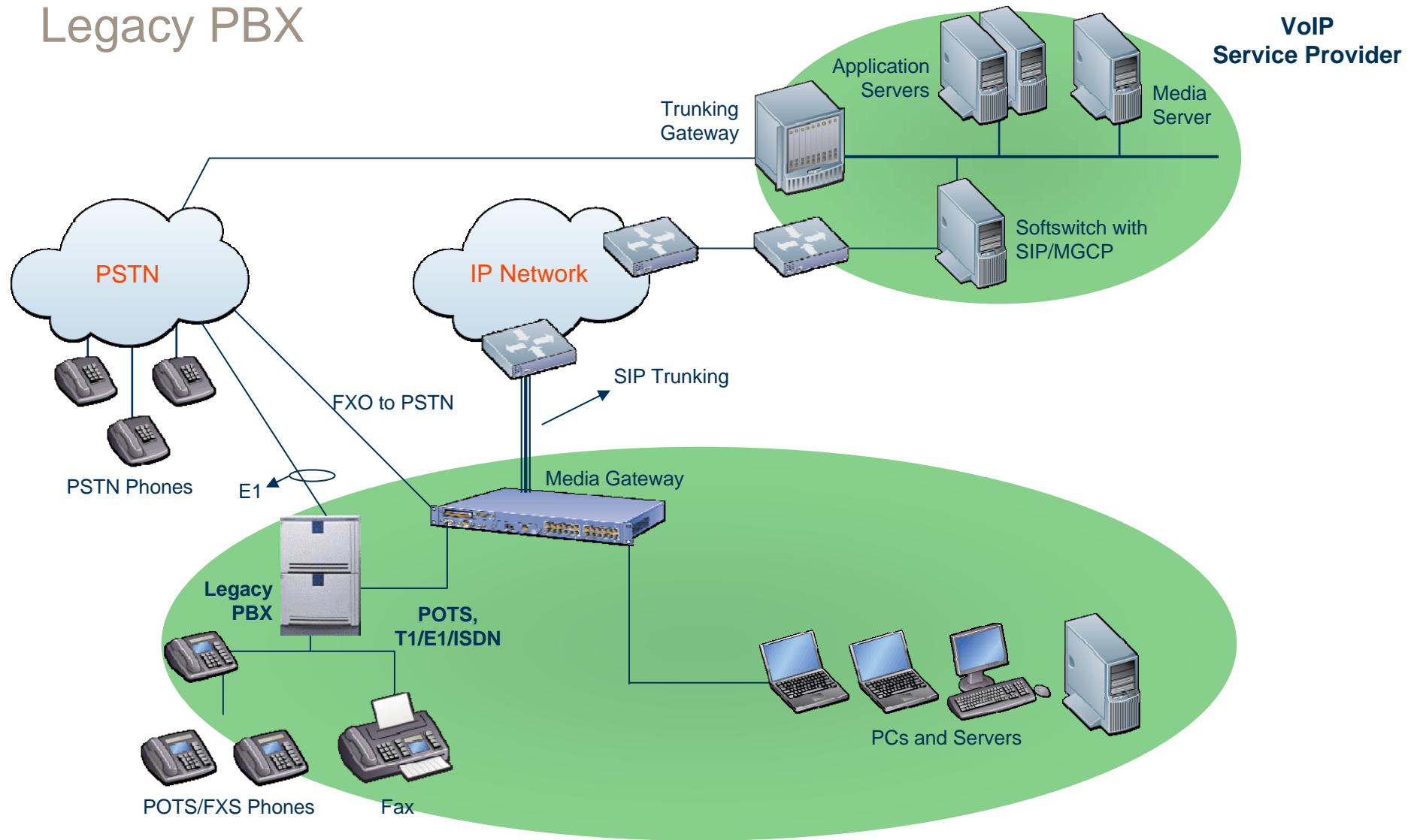


IP-PBX - Scenario



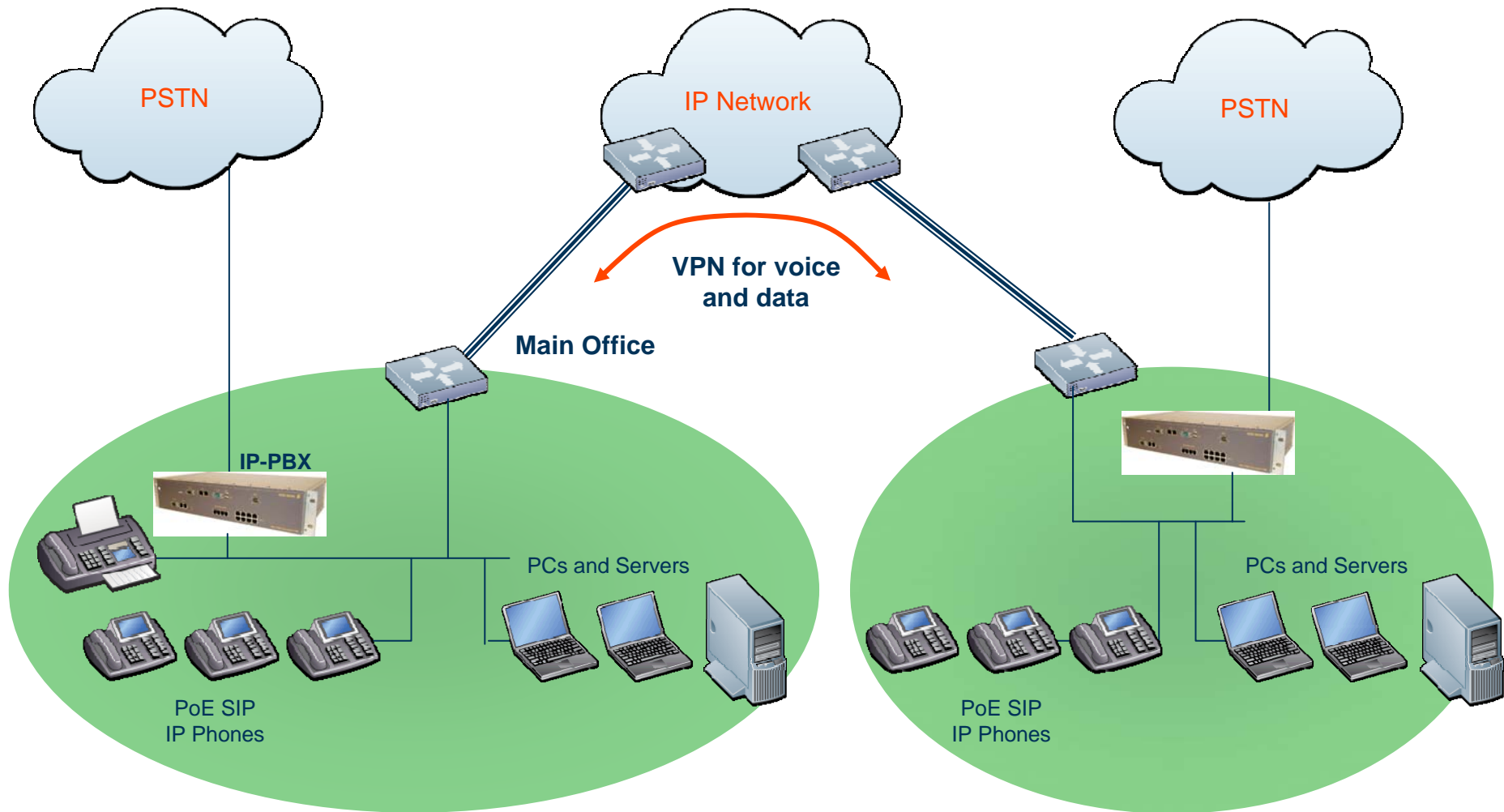
Public VoIP

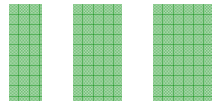
Legacy PBX



Private VoIP

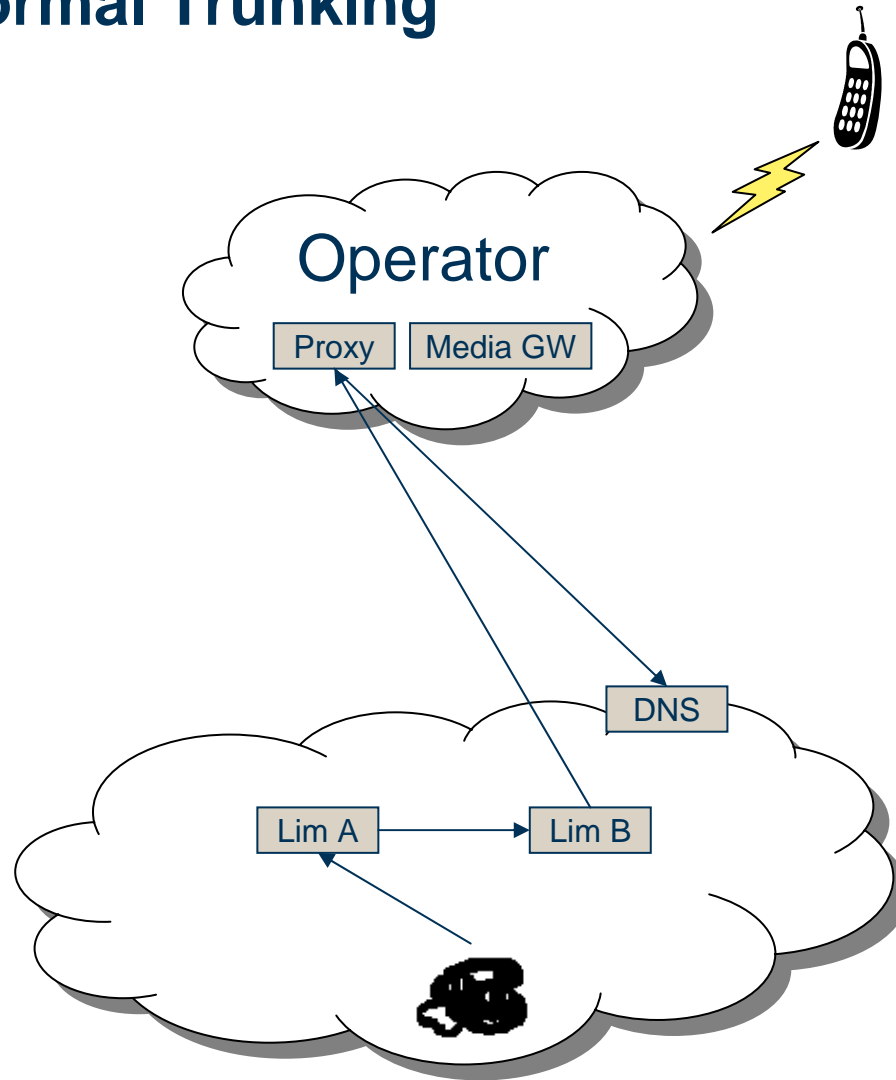
IP-PBX with Branch Office





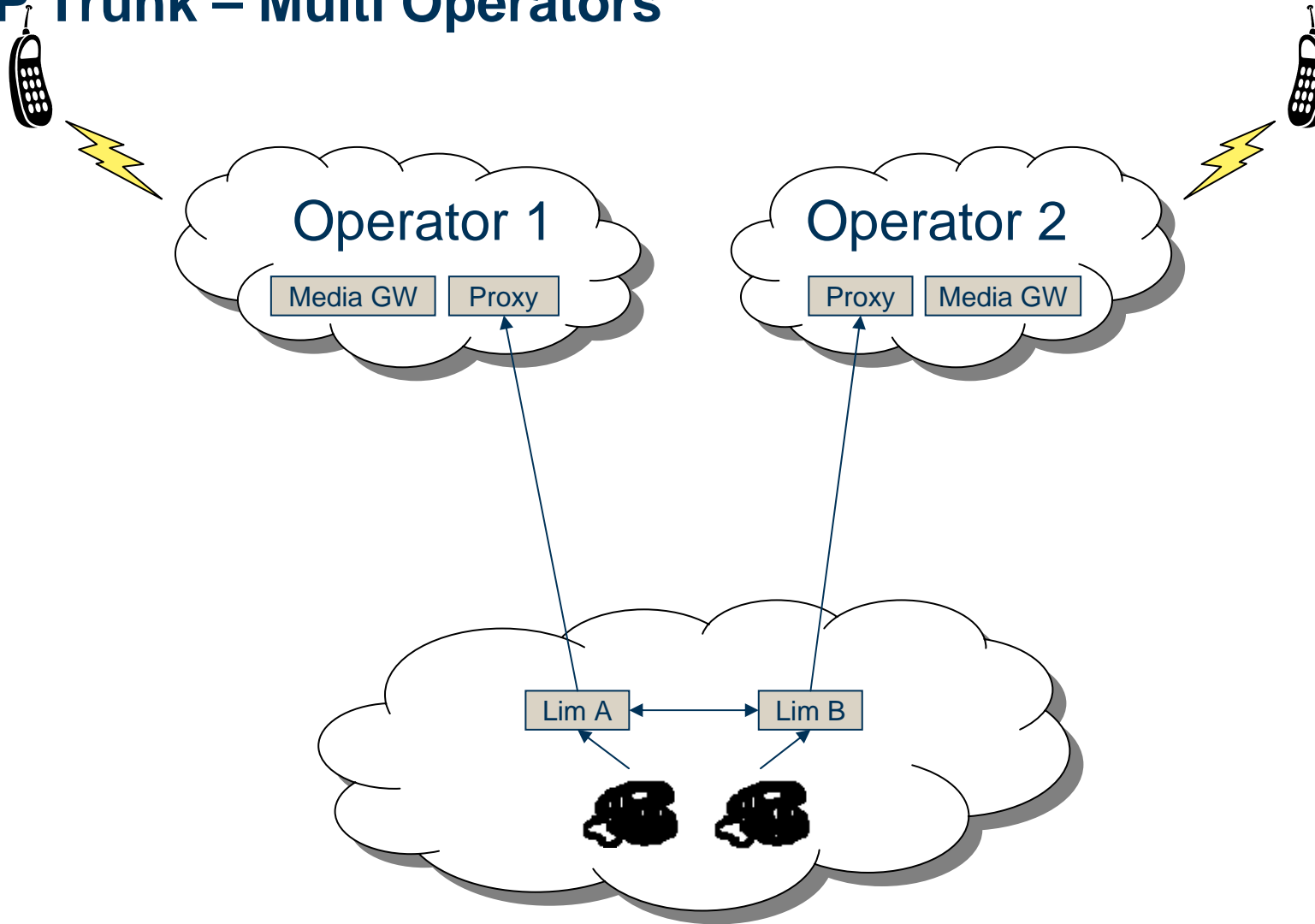
MX-ONE™ V.3

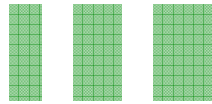
SIP Trunk – Normal Trunking



MX-ONE™ V.3

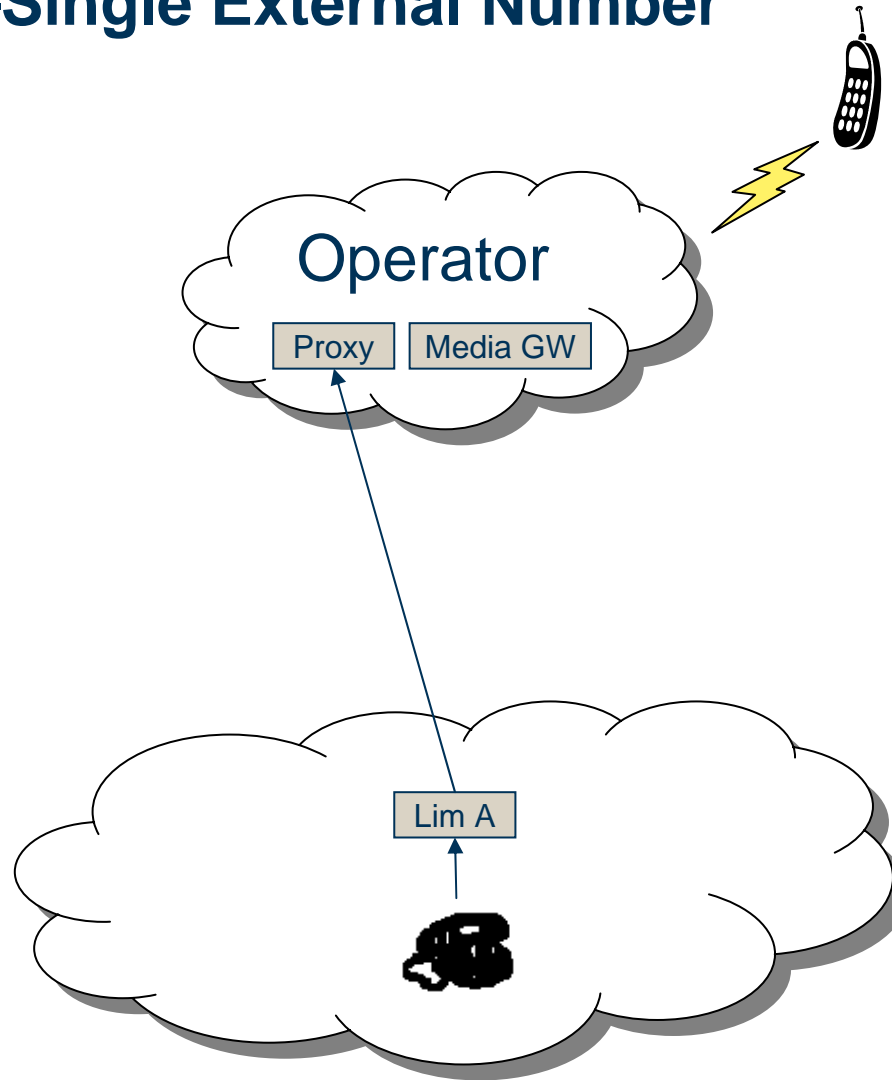
SIP Trunk – Multi Operators





MX-ONE™ V.3

SIP Trunk –Single External Number



Conclusion

- There are opportunities in Latin America for:

VoIP operators

Traditional operators

SME

Large Enterprises

**Telecommunications
Vendors**

Thank you !

Oswaldo Campos

Oswaldo.campos@ericsson.com

+ 55 11 6224 4684

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TAKING YOU FORWARD