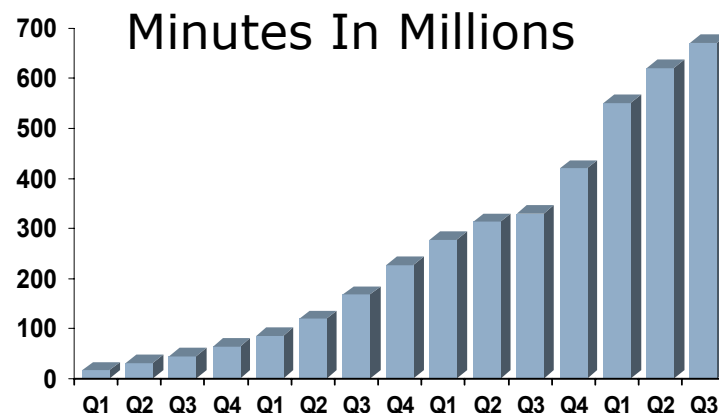# VoIP Benefits and Obstacles

Nassia Hanewich
Director, South East Europe

iBasis Overview
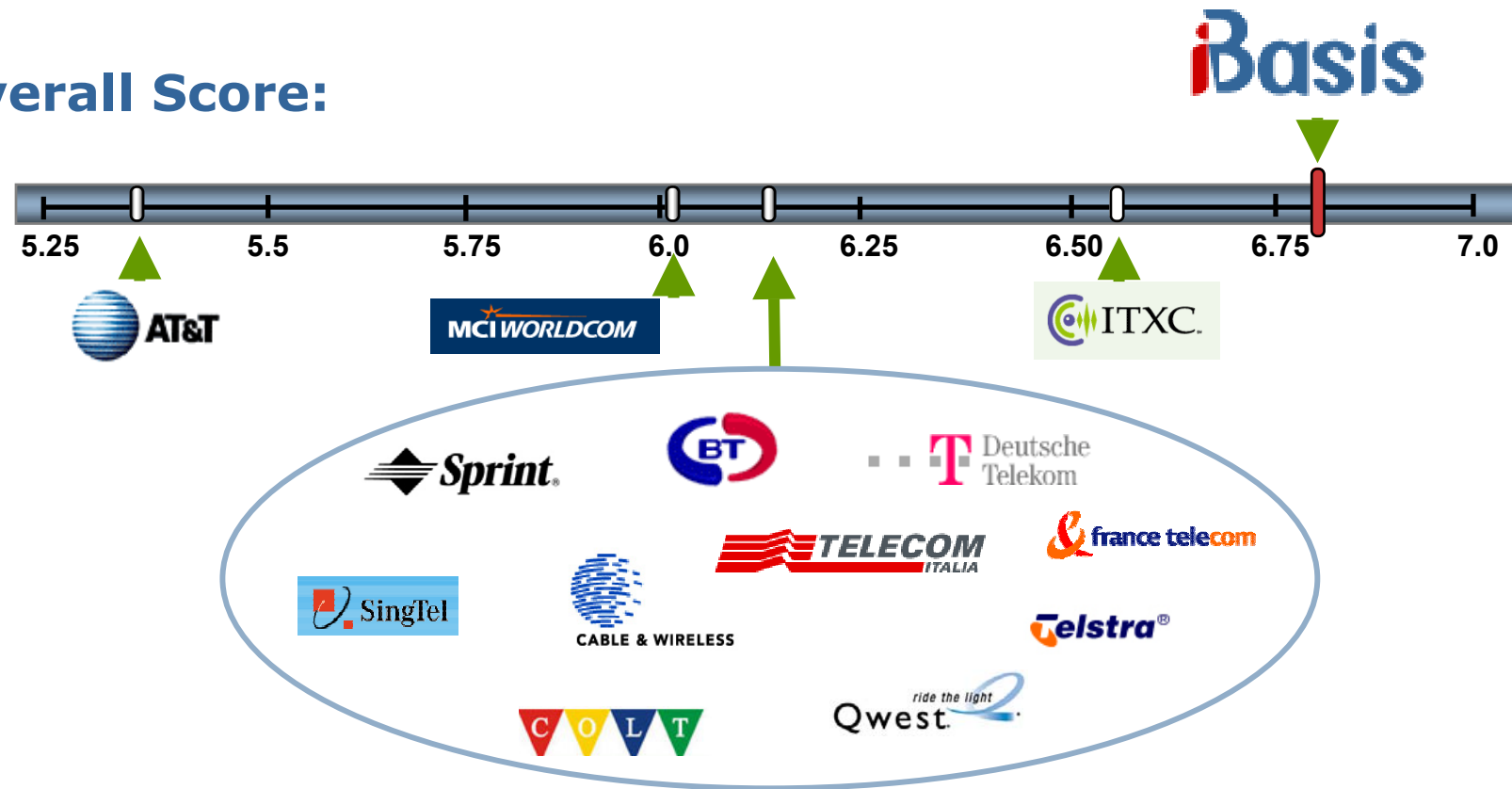
#1 International Wholesale Carrier*

- One of 10 largest carriers of international traffic
- Global Footprint – The iBasis Network
  - 90 countries; 700 PoPs
  - 160+ international carriers
- 2002 Revenue (est.): $180 - 200 million
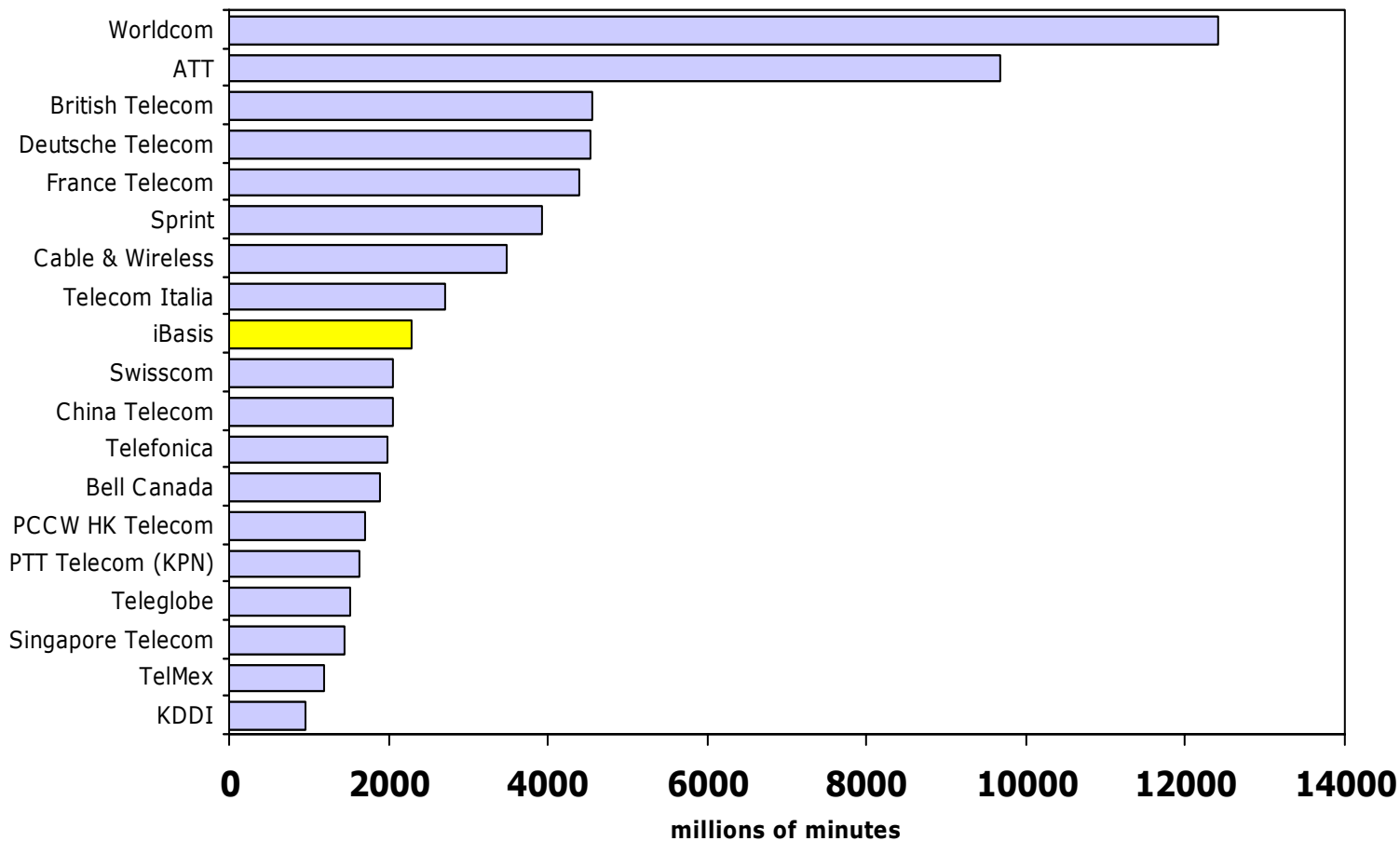- Annual run-rate > 2.5 billion minutes
- Average daily minutes: 7.6 million

Minutes In Millions

Revenue In Millions

* Atlantic-ACM 2002 Carrier Report Card

iBasis

iBasis Named #1 International Wholesale Carrier

Overall Score:

One of the Top International Carriers

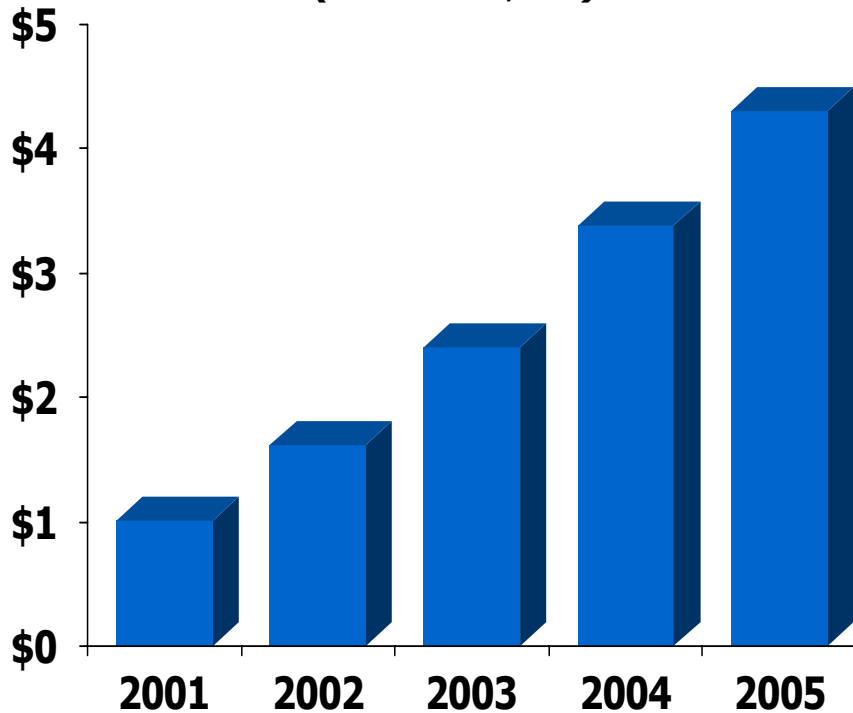Source: *Telegeography 2002*
*iBasis based First Half '02 traffic volume

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International Telecom: Large and Growing

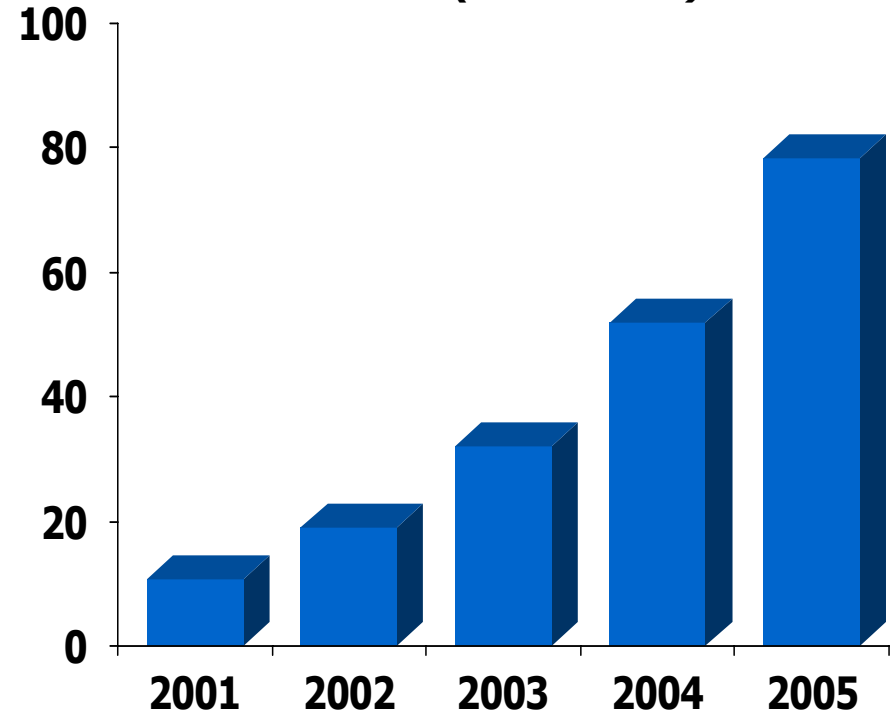| Indicator	1990	1995	2000
Revenues from Int'l Traffic (billions of US$)	$37	$55	$70
Minutes of Int'l Traffic (billions of min.)	33.5	61.6	132.7
Countries Permitting Competition	6	18	49
Top 20 Carriers' Share of Traffic	86%	72%	50%
Market Share of New Carriers	<1%	5%	31%

Source: Telegeography 2002

iBasis

Explosion in Worldwide VoIP

Worldwide Wholesale VoIP Revenues (Billions $US)

Worldwide Wholesale VoIP Minutes of Use (In Billions)

iBasis has 13% share of Int'l VoIP Traffic

IDC, IP Telephony Market Forecast 2002

iBasis

iBasis Services

- ## International Wholesale Voice Services
  Origination and termination of voice and fax traffic

- ## IBOxpress
  Enables Carriers to Originate and terminate international traffic and prepaid traffic over the iBasis Network w/o capital expense

- ## IP CallCard
  A full turnkey prepaid & postpaid platform leveraging the iBasis IP infrastructure

- ## ConnectPoint Global Access services
  Local access numbers that terminate to service providers' platform, conference bridges, prepaid server or IVR in any location and country

iBasis

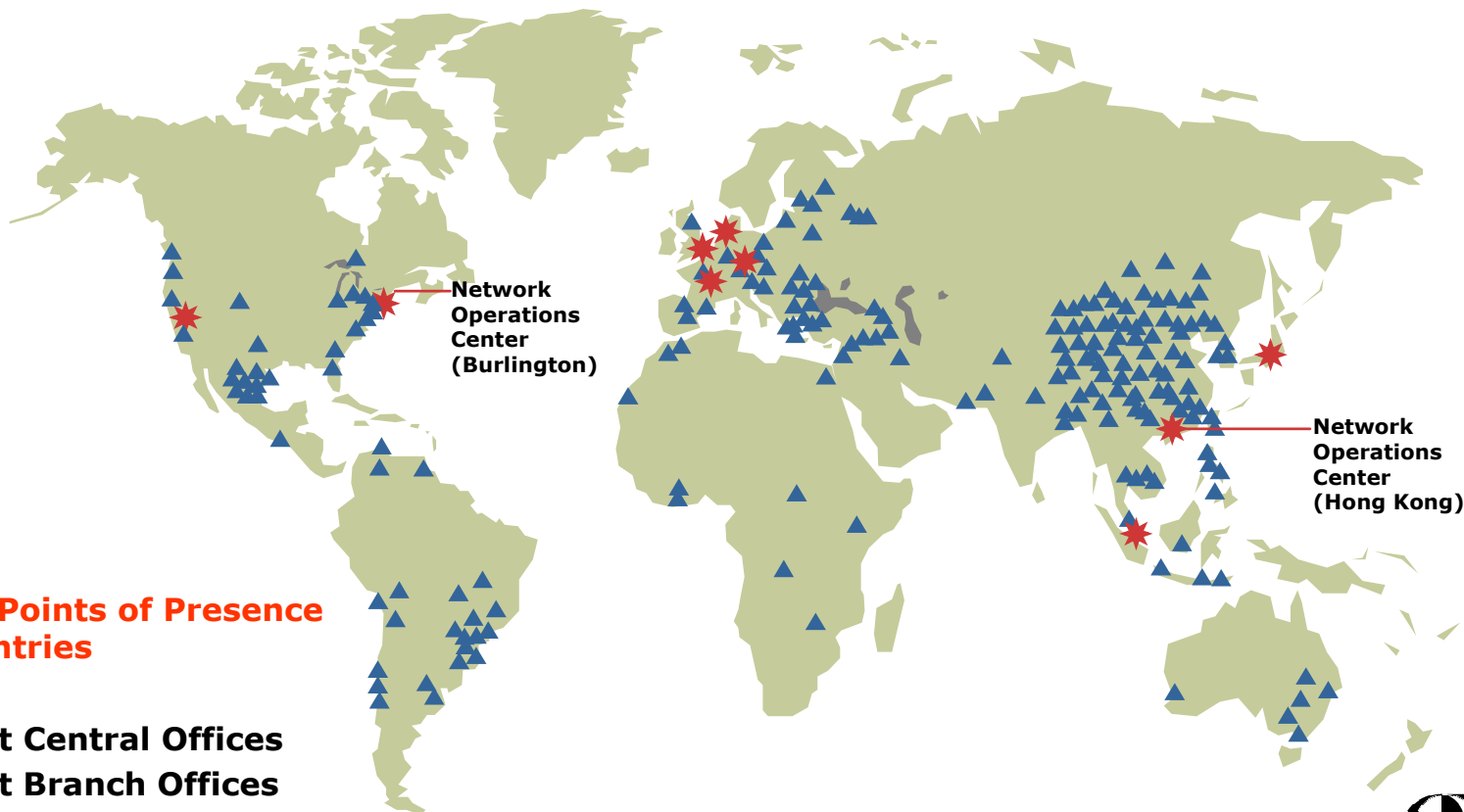# Breadth & Depth of International Coverage

Meet carriers needs

- Comprehensive outsourced worldwide coverage
- Full country coverage with overflow capacity & redundancy
- Termination in select destinations using iBasis direct routes

Match carriers' requirements

- Competitive prices
- Completion rate
- High quality

iBasis

The iBasis Network™

Largest International Cisco Powered Network for Voice on the Internet

Network Operations Center (Burlington)

Network Operations Center (Hong Kong)

Over 700 Points of Presence in 90 Countries

★ **Internet Central Offices**
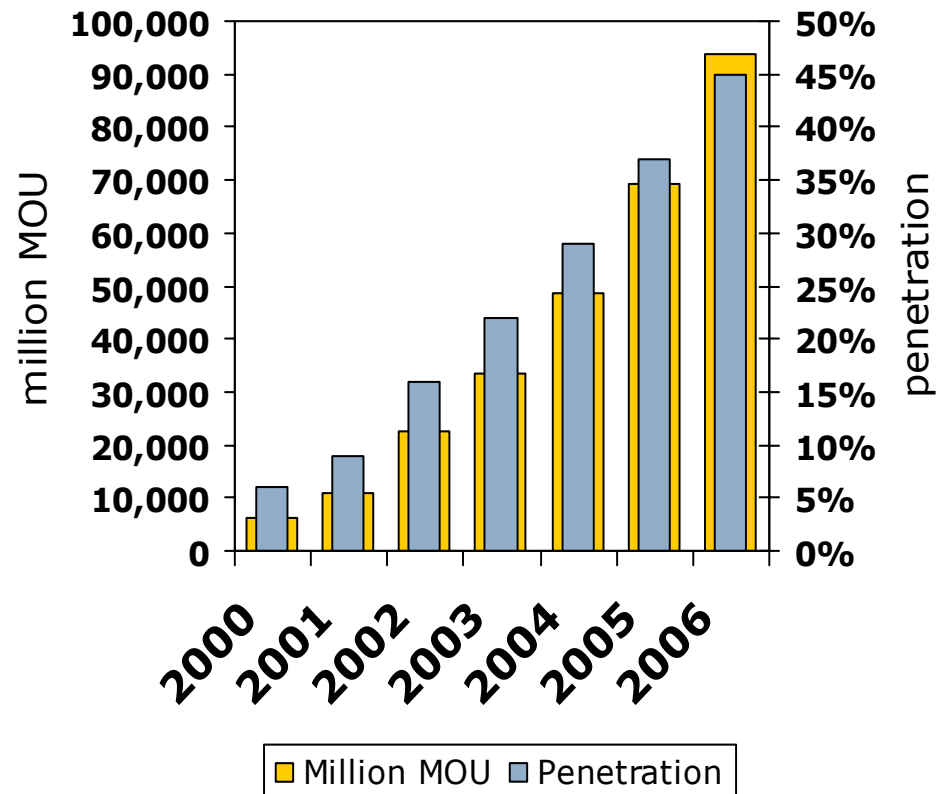▲ **Internet Branch Offices**

iBasis

Challenges facing
South East European carriers

- Diverse regulatory frameworks and markets

- Low teledensities and underdeveloped infrastructure

- Lower level of foreign investment

- Rapid progress towards modernization & liberalization

- Growing demand for services

International VoIP: Strong and Growing

- **Improves service margins**

- **Efficiently expands global reach**

- **Provides competitive advantage**

- **Quality indistinguishable from PSTN**

- **Penetration on many routes exceeds 20%**

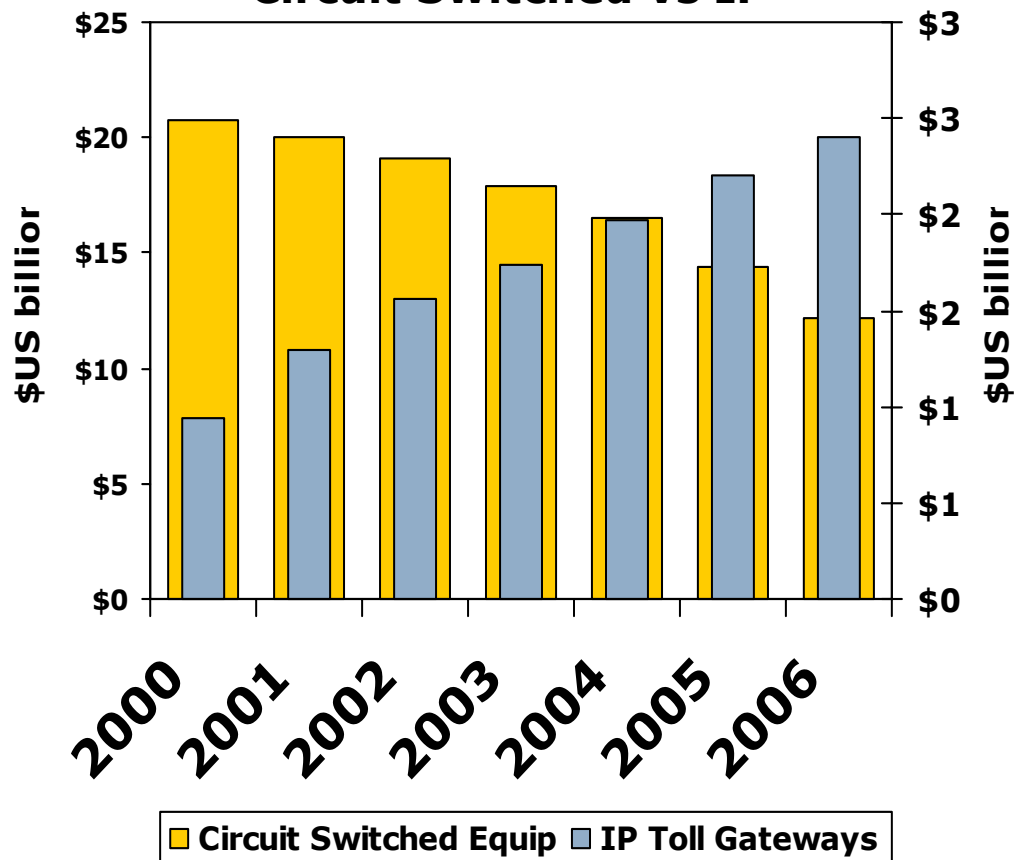- **6% of global traffic – double the level in 2000**

International VoIP Forecast, 2000-2006

Source: *TeleGeography 2002,* Probe Research 2001

Global Circuit-switched Deployments Shrinking

Global Equipment Sales, 2000-2006
Circuit Switched vs IP

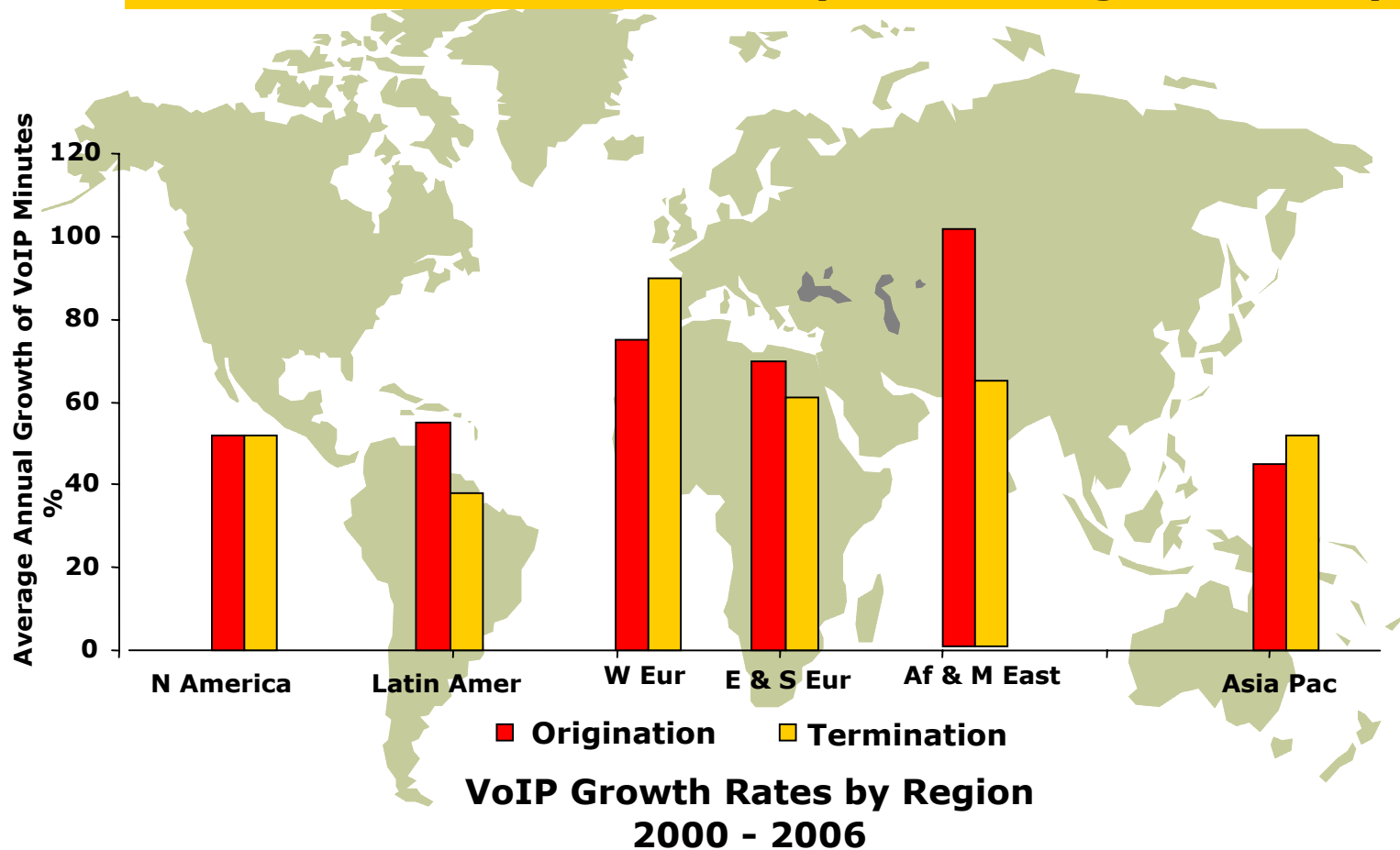Legend: ■ Circuit Switched Equip ■ IP Toll Gateways

Source: Wintergreen Research 2001, IDC 2001

- **VoIP equipment deployments growing**

- **Circuit-switched equipment deployments declining**

- **VoIP being adopted by leading carriers**
    - **Cable & Wireless**
    - **BT**
    - **SBC**
    - **China Unicom**
    - **Sprint**

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VoIP: A Worldwide Phenomenon

Worldwide VoIP Growth 57% (total traffic growth 15%)

VoIP Growth Rates by Region
2000 - 2006

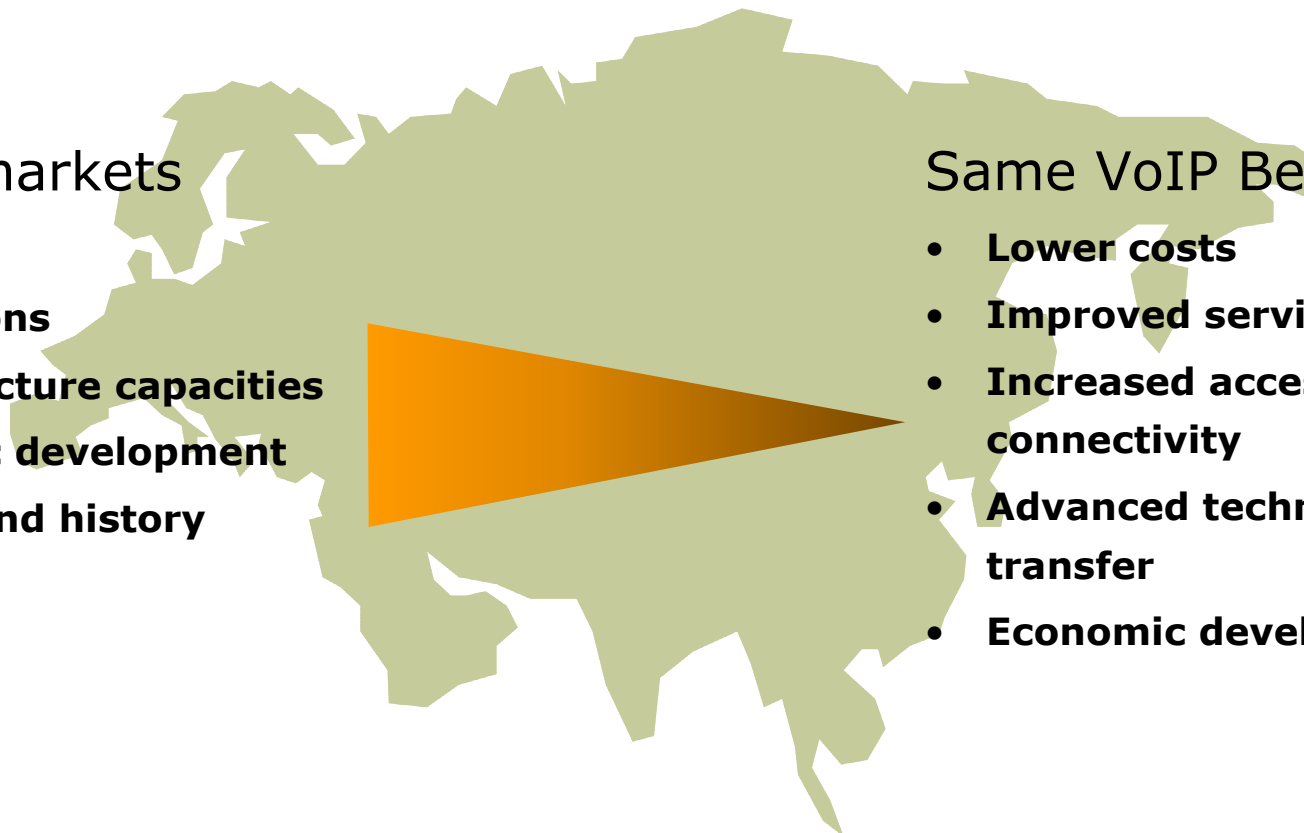Source: Probe Research 2001, TeleGeography 2002

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Same Trend Underway in South East Europe

Varying markets

- **Regions**
- **Regulations**
- **Infrastructure capacities**
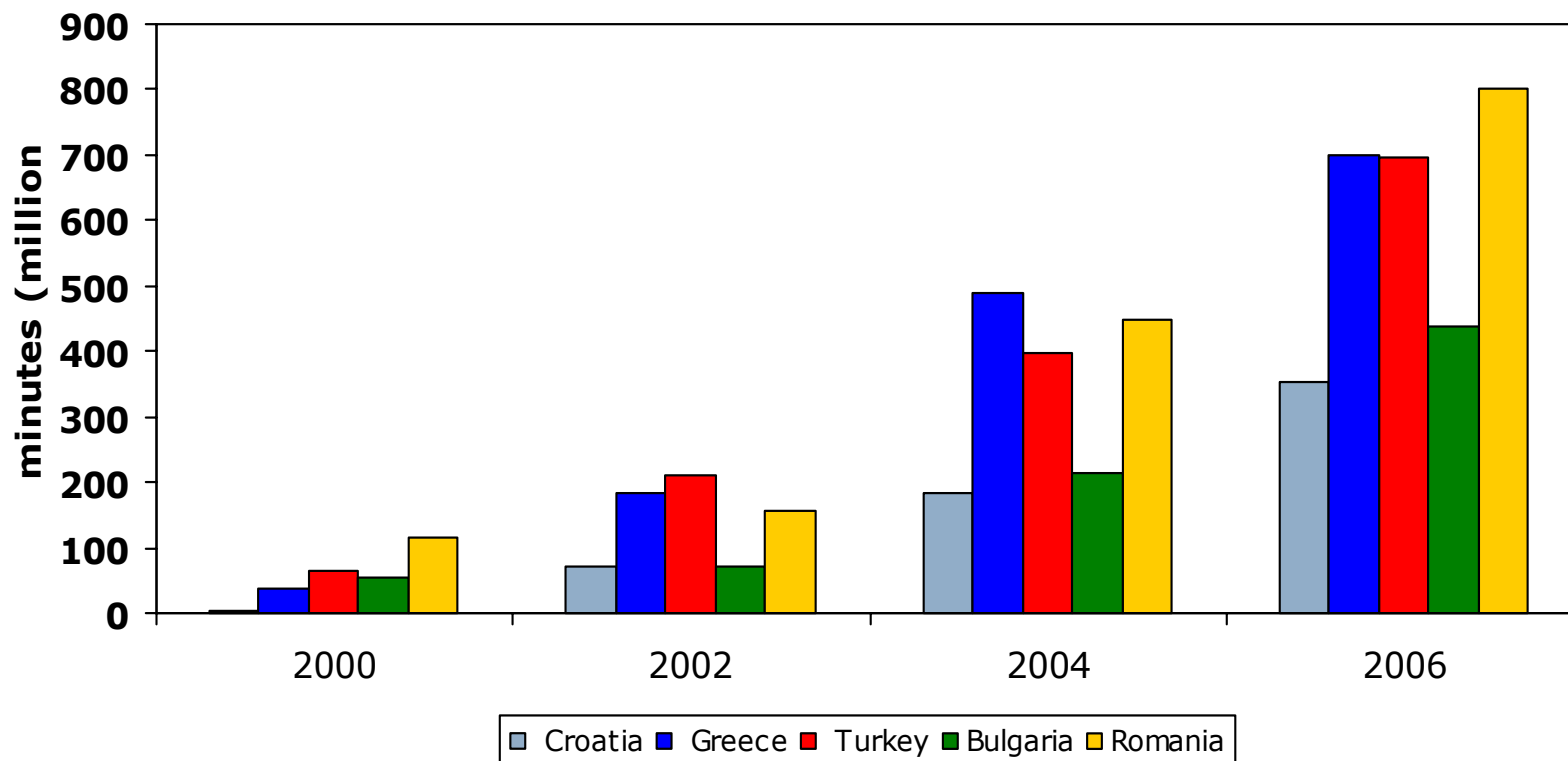- **Economic development**
- **Culture and history**

Same VoIP Benefits

- **Lower costs**
- **Improved service**
- **Increased access & connectivity**
- **Advanced technology transfer**
- **Economic development**

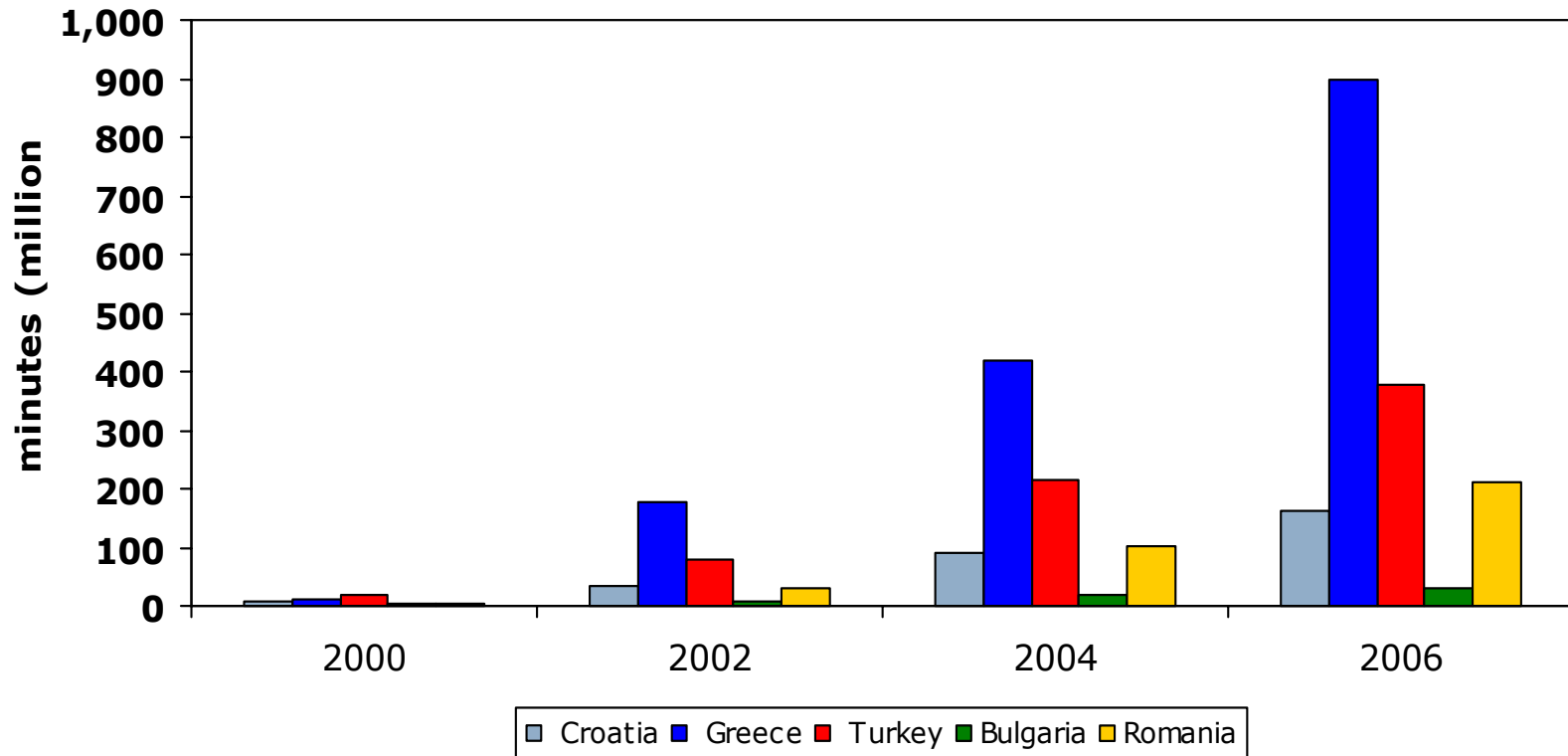# South East Europe Seeing Growth in VoIP Termination

International Inbound VoIP Traffic
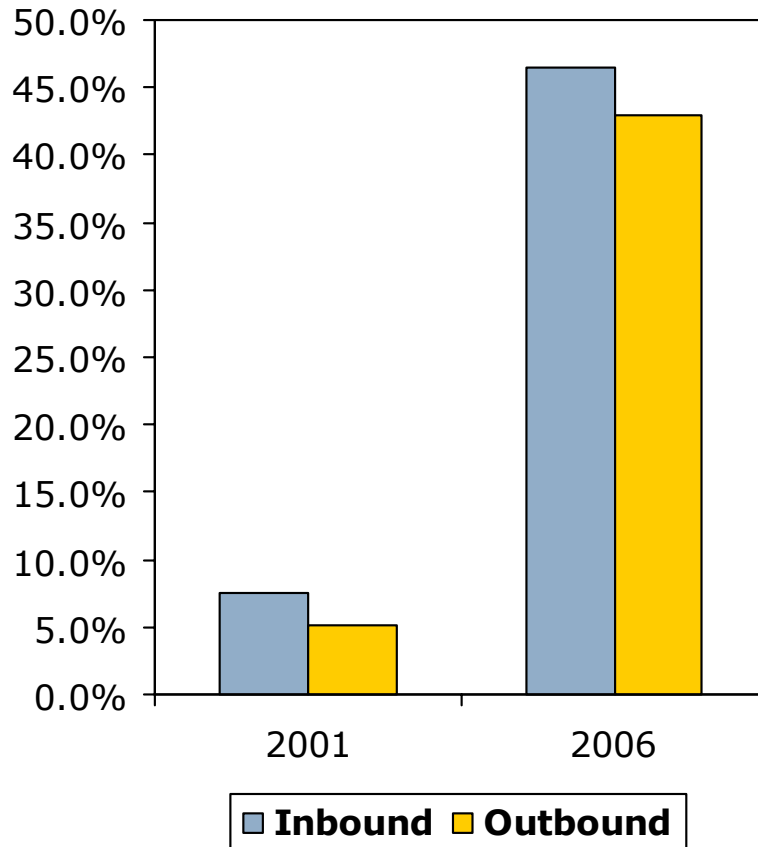

Source: Probe Research 2001

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VoIP Origination Also Growing

International Outbound VoIP Traffic

Source: Probe Research 2001

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VoIP Penetration in South East Europe

- **VoIP penetration** will increase **four-fold** in the next five years

- **iBasis traffic** in the region grew **217%** from Q3 00 to Q3 01

iBasis

International: Not Core for Most Major Carriers

% Revenue from International Traffic

Source: *TeleGeography 2002*

iBasis

Major Carriers Adopting VoIP

OTEnet Case Study

- Interconnection with The iBasis Network for global Internet Telephony since 2001 OTE, the national carrier of Greece was privatized
- Accelerate creation of a new, fast-growing international service, offered by the OTE ISP subsidiary, OTEnet
- **Over past 8 months**, The network has supported a **nearly ten-fold growth in OTEnet's international traffic**.
- OTEnet routes international voice traffic over The iBasis Network™ through an iBasis Internet Branch Office (IBO) facility, enabling an efficient, low cost, high quality IP-to-IP interconnection

The Move to VoIP in The Region

- Predicted to post four-fold growth in VoIP traffic by 2006 (Probe Research 2001).
- iBasis provides international service in Bulgaria, Greece, Romania, and Slovenia
- More than 45 European carriers are connected to iBasis for international service
- Traffic growth in Southeastern Europe: + 173% from 2000 to 2001

iBasis

VoIP is Poised for Growth

- Governments see VoIP as "Leapfrog" technology, growth driver
  - China
  - Latin America
  - Africa
  - Central & Eastern Europe
- Opportunities to capture new revenues
  - International service expansion
  - Value-added services
- Carriers outsourcing international service to VoIP providers to focus on "core" domestic businesses
  - Fixed-line
  - Wireless, etc.

VoIP: Threat or Opportunity?

- Reduces capital expenditure, operational & transport costs
- Helps manage settlements
- Provides instant global footprint
- Offers access to new markets
- Enables new services
- Delivers PSTN reliability & quality

Thank You