

# VoIP Quality in Converging Telephony and IP Networks



iBasis



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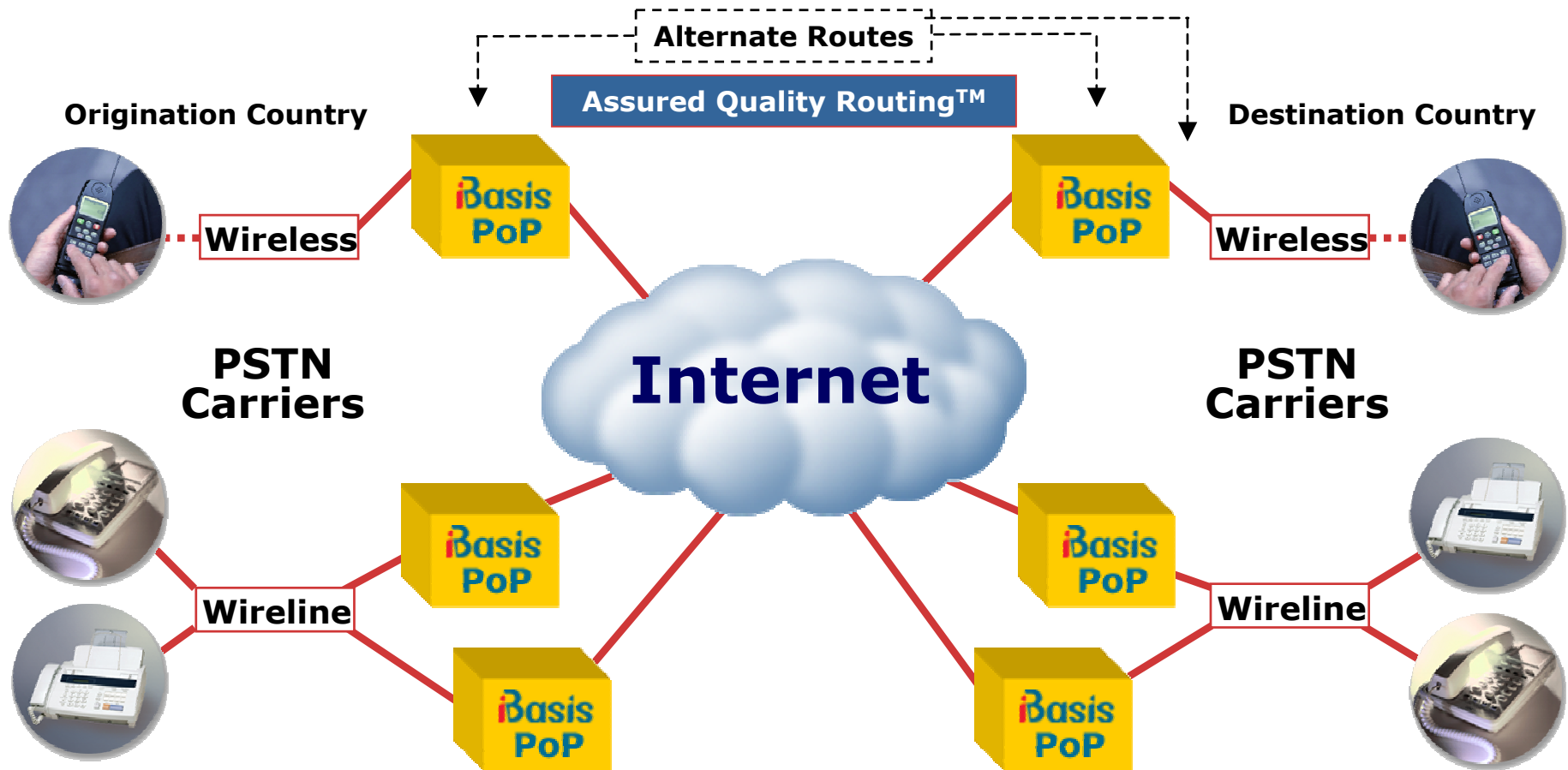
# Better Quality than Industry's Benchmark

## Answer Seizure Ratio Comparison

Country	Industry Avg*	iBasis
Argentina	52%	52%
Brazil	50%	52%
China	53%	58%
Indonesia	46%	46%
Israel	59%	64%
Mexico	47%	50%
Russia	39%	45%

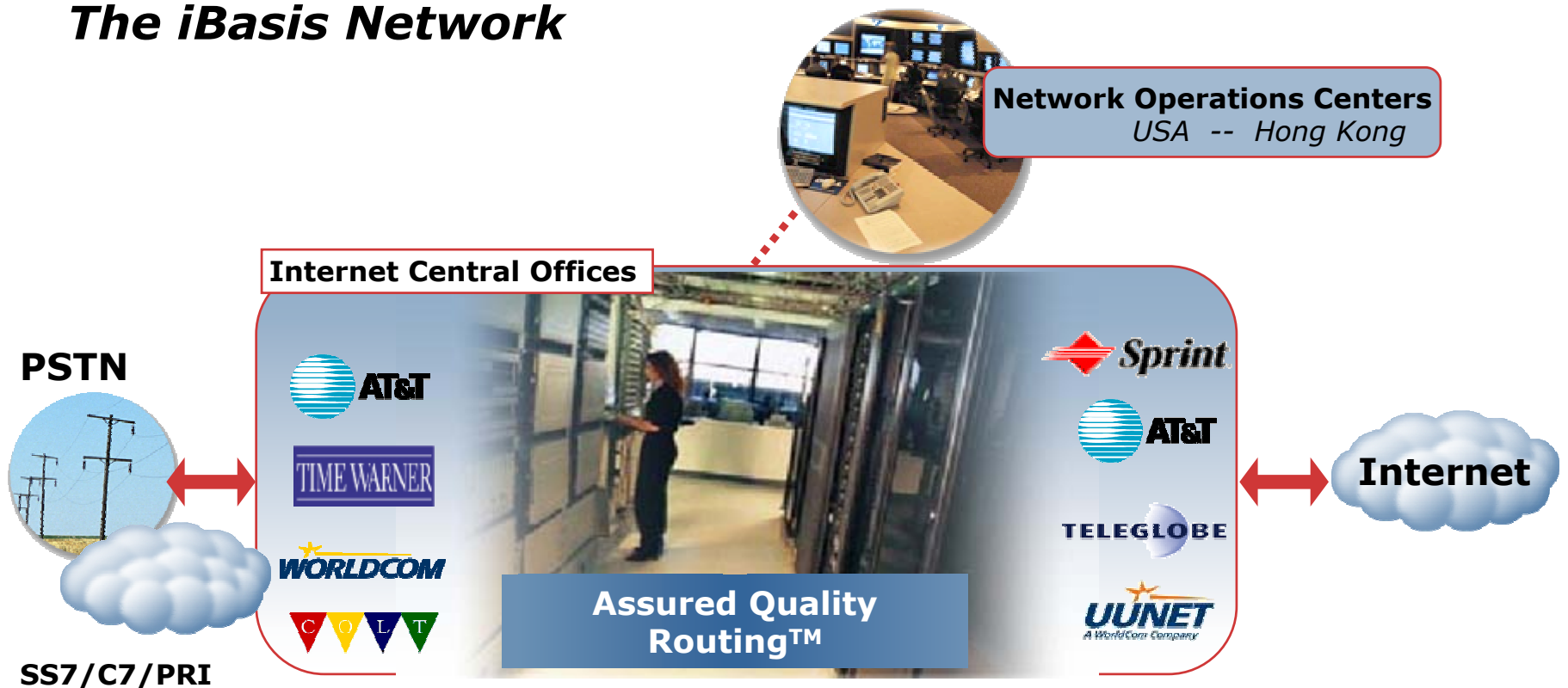
\*Industry average is the average reported by six Tier One International Carriers

# A Seamless Interconnection: the Internet and the PSTN



# Toll Quality on the Internet

## *The iBasis Network*



# Advanced IP Architecture & Engineering Tools

## Patent-pending proprietary technology

- Assured Quality Routing™ (AQR) enables PSTN-quality over the Internet
  - Real time monitoring and alarming
  - Decline capability
  - PSTN re-routing on highest quality off-nets
- PathEngine™ automatic best route selection
- Coupled with highest quality ISP providers
- Complemented by many destinations with multiple partner termination options

# Real-Time Monitoring & Traffic Management

- Fully-staffed 7x24, 365 days/year
- Redundant NOCs in Burlington, MA and Hong Kong
- Full network monitoring of servers, IP, and PSTN networks
  - Real-time, end-to-end analysis of call behavior
  - Event alarming
  - Performance measurement
  - Analysis of traffic patterns and network utilization
  - Event correlation
  - Trouble ticket management
- Remote access to each device and process
- Distributed, redundant monitoring systems being deployed



# Quality VoIP Requires Robust Network Solutions

## **The iBasis Network: The Next Generation of VoIP**

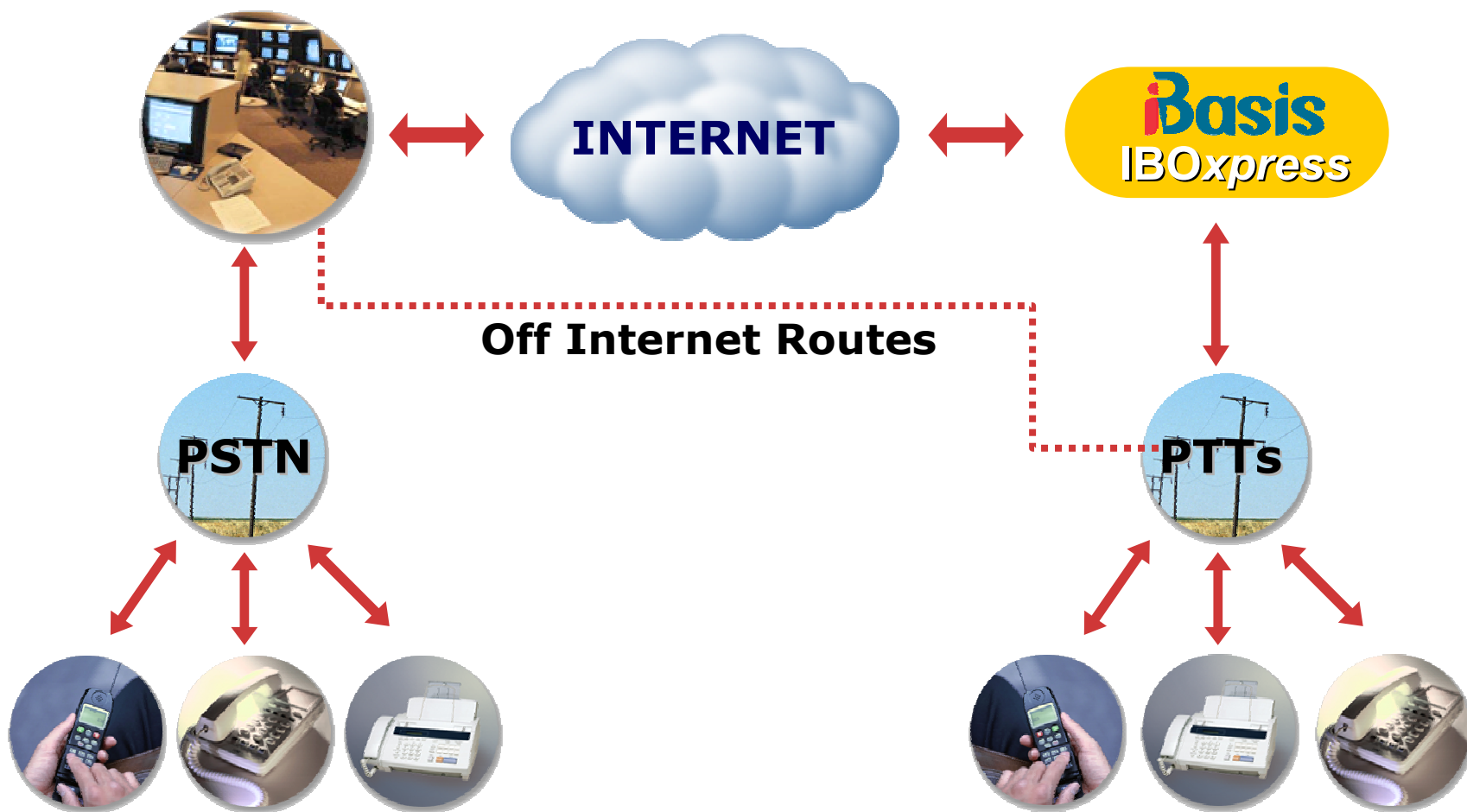
- “Real-time” monitoring of every IP route
  - Latency
  - Packet loss
  - Jitter
- Continuous monitoring of PSTN metrics
  - Call completion (ASR)
  - Call Duration
  - Post Dial Delay (PDD)
- Proprietary, patent-pending technology
  - Assured Quality Routing®
  - PathEngine™
- Results in automated, dynamic ISP selection and IP path selection for best quality of service on every call

# Benefits of iBasis Switchless Architecture

## **Benefits of this new architecture include:**

- Millions of dollars in savings in operational costs and capital expense by eliminating the need for costly telecommunications switches and other equipment and connectivity in central offices
- Greatly simplified provisioning, real-time route monitoring, and network management by decreasing the number of network components involved in carrying a call
- Significantly improved voice quality by eliminating multiple compression/decompression cycles as a call moves through the network
- Ability to increase network capacity without incurring capital expense by redeploying ICO equipment

# Point of Presence



# Immediate Deployment at Minimal Cost

- Internet Branch Office (IBO)
  - A Internet telephony PoP can be built in weeks
- Origination and termination
  - quality equal to PSTN
  - instant global footprint + one interconnection with world's carriers
  - turnkey solution offers immediate revenue for termination
- Owned, maintained, and operated by providers like iBasis
- Deployment, installation & testing by global technology companies like Cisco
- Robust capabilities
  - 60-360 simultaneous digital voice connections
  - 600,000 to 3 million minutes per month

# A Turnkey Point of Presence

- A turnkey iBasis POP
  - Co-Located at one of your switches
  - Small Footprint and Easy to Install
  - ISDN or C7/SS7 Signaling Options
- Paid for and managed by iBasis
  - Remote monitoring and management
  - No visibility by iBasis into your network
- Combines Cisco and iBasis technology
  - Cisco gateway
  - iBasis QoS probe
- Your dedicated 'on-ramp' to The iBasis Network
  - Scaleable capacity
  - Fully integrated with iBasis' AQR technology to ensure QoS

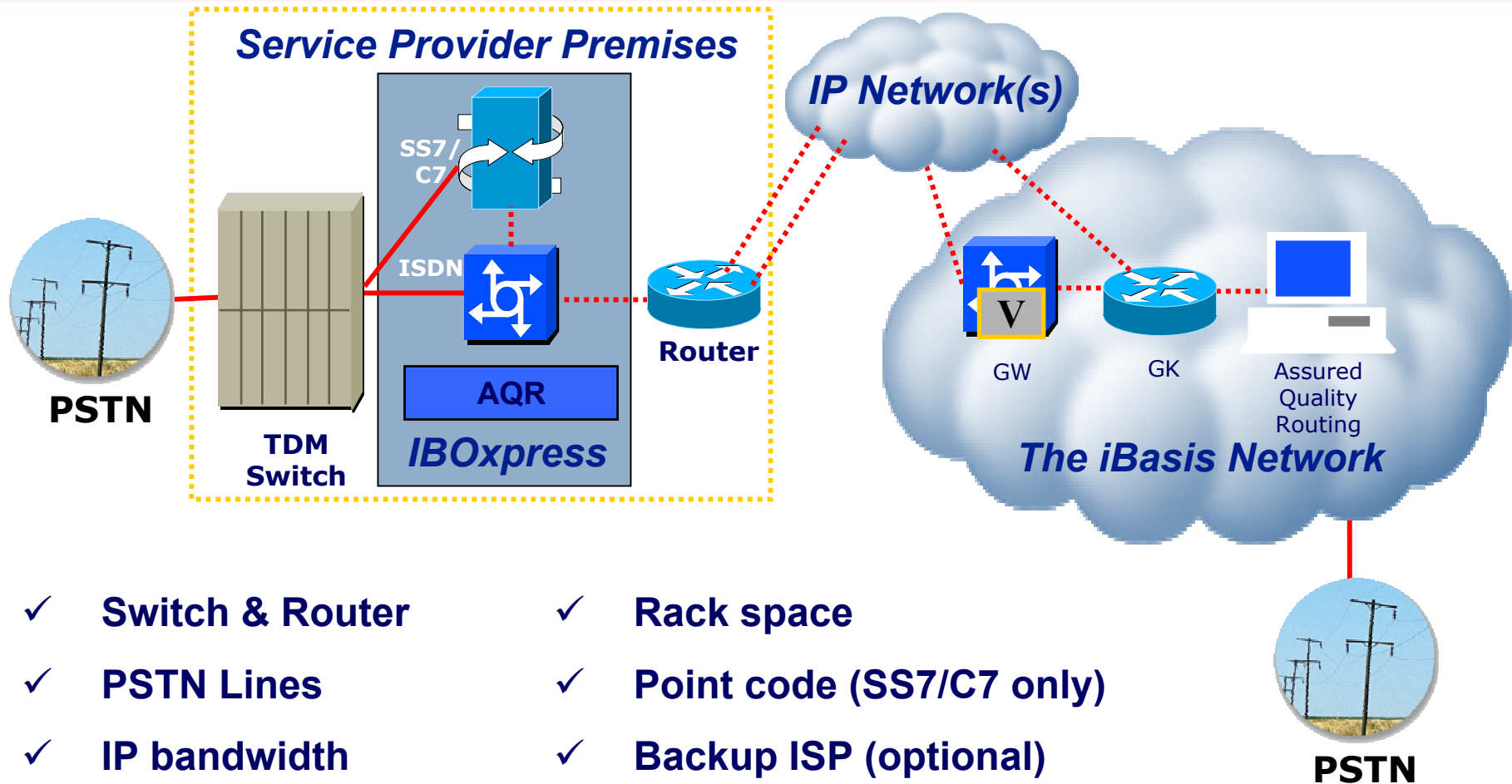
# A Managed and Paid PoP Option

- Fast and free interconnection with iBasis
  - Save time and cost of establishing a TDM link
  - Up and running in 2-3 weeks following contract execution
  - Achieve your goals for volumes and margins
- Rapidly scaleable to 8E1's
- Opportunity to directly experience VoIP technology and quality in a risk-free way
  - With option to acquire the POP in the future
- Opportunity to terminate traffic and offset the traffic you send to iBasis
  - If your coverage, quality and cost are consistent with our other customers' needs

# The Advantages

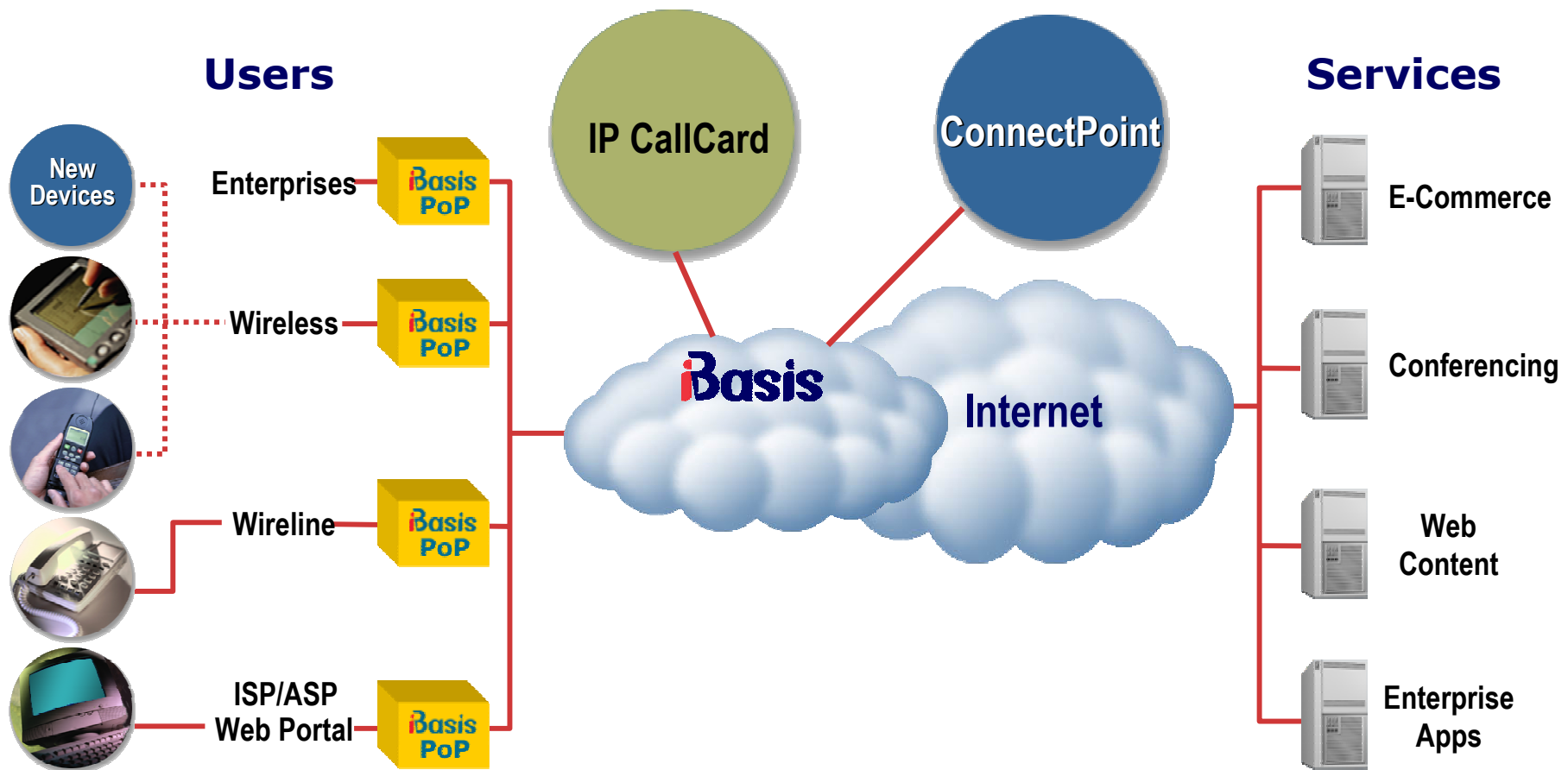
- Access to iBasis ICOs is not feasible
  - Incremental cost to reaching an ICO via TDM interconnect
  - International access capacity congested
  - Provisioning organization backlogged with work
- Desire to begin or accelerate transition to voip network
  - Get direct experience with end-to-end VoIP
  - Option to Acquire POP preserves your flexibility and independence
- Willing to provide co-location, internet access, installation, and share handling costs
- Can commit to sending iBasis at least 1MM minutes of traffic per month
  - Not contractual, but necessary for iBasis to continue to justify the dedicated Xpress at your site

# How it Works



- ✓ Switch & Router
- ✓ PSTN Lines
- ✓ IP bandwidth
- ✓ Analog line
- ✓ Rack space
- ✓ Point code (SS7/C7 only)
- ✓ Backup ISP (optional)

# The iBasis Network: Optimized for Voice



# Leveraging a VoIP Infrastructure

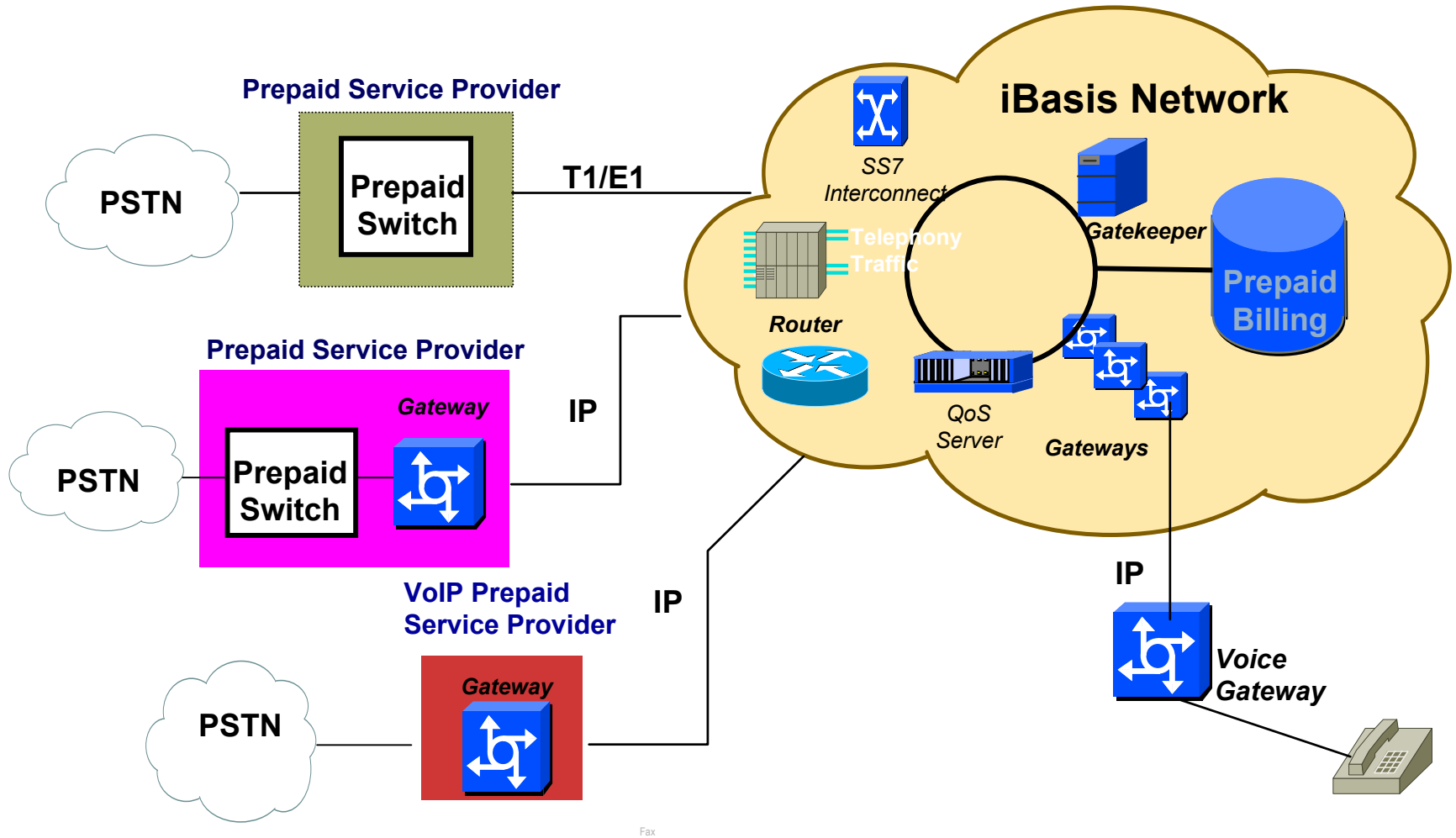
## Enhanced Voice Services

- IP CallCard™
  - Wholesale calling card billing platform
- ConnectPoint® Global Access
  - International local access for global services
- ConnectPoint® Wholesale Conferencing
  - Wholesale audioconferencing services

# IP CallCard™: A Real-time Billing Solution

- Call Authentication, Authorization and Accounting (AAA)
- Wide variety of pre- and post-paid card services
  - Fixed balance and rechargeable debit cards
  - credit accounts and limited credit accounts
- Prepaid, Postpaid origination and call termination in same gateway
- A flexible and scalable platform to support high call volume & a large number of accounts
- Customized pricing

# Connecting Prepaid Service Providers to The iBasis Network



Fax

# IP CallCard: Major Features

- Interactive Voice Response
  - IVR support in multiple languages
  - Customized messages
- Fraud Prevention
  - Real-time deductions
  - Limited PIN retries
  - Limited destinations

# The Benefits of Outsourcing

- Generates revenue faster
- Limited investment
- Higher margin and more competitive
- Keeps breakage for more profit
- Calls worldwide via iBasis Network

# ConnectPoint Global Access Services

- Local Direct Inward Dial (DIDs) numbers from our Points of Presence
  - local or toll-free numbers backhauled to your bridges
  - Provisioned, maintained and owned by iBasis
- Outdial capabilities for additional participants
- Colocation possibility for further expansion in our Internet Central Offices (ICOs)
  - Carrier-grade facilities in major international hubs
  - High performance and high capacity facilities

# ConnectPoint® Global Access for IP CallCard™

- Expands access countries for international travelers
- Calls to home country or anywhere
- Uses the same PIN
- Provider sets destination rates for each origination country
- Toll-free access available at iBasis ICOs and other selected countries

# ConnectPoint® Wholesale Conferencing

- Hosted, unattended audio conferencing solution
- Scalable solution, fully redundant, using Octave OCI-1000 bridges
- Guaranteed availability
- Cost-effectively handles overflow
- Market trial opportunity
- Faster ROI
- No hardware to maintain

# ConnectPoint® Wholesale Conferencing

- Easy to use, password protected Web Interface (WebView) allows for:
  - Scheduling Conferences
  - Chair Control of Conferences
  - Configuring User Databases
  - System Configuration and Maintenance
- iBasis provides summary and detailed billing information
- All calls are hosted by The iBasis Network™
  - 24x7 support
  - Full redundancy
  - Scalability to meet any demand
- Performance is backed by a Service Level Agreement

# Wholesale Conferencing Advantages

- Scale capacity to demand dynamically
- Reduce capital expenditure budgets
  - Bridges are expensive
    - Large capacity bridges cost > US\$1 million
    - Even small bridges cost > US\$200,000
- Accelerate entry into the market
- Provide a single source for telecommunications services while allowing focus to continue on core competencies
- Reduce demand on human resources
- Market new IP-based features and services

# Partnering with a VoIP Network Provider

- Accelerate deployment without capital expense
  - Turnkey outsourced solution for service providers
- Increase revenue
  - Scalable platform that grows with your business
  - Competitive and flexible price structure
- Reduce costs
  - Lower cost of international voice traffic
  - Lower deployment costs & operating costs
  - Less operational staff
- Simplify your infrastructure & international operations
  - iBasis global network footprint
  - iBasis interconnection agreements
- Improve quality of international service
  - iBasis quality superior or equal to PSTN
  - Toll free access in different countries

Thank you!



**iBasis**

Enhance Service Channel Platform

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