

Ascend

Ascend Overview for Enterprise Customers



Ascend Communications, Inc.
October 1997





Ascend Communications

**Delivering Products and
Technologies for building World-
Class Service Provider Networks and
Enterprise WANs**



Ascend Communications

■ Headquartered in California

■ 1680 Employees

■ Quality: ISO 9001

■ 9 R&D Facilities

■ TAC Centers

- ◆ *Alameda, USA*
- ◆ *Tokyo, Japan*
- ◆ *Sophia Antipolis, France*
- ◆ *European Repair Depot*

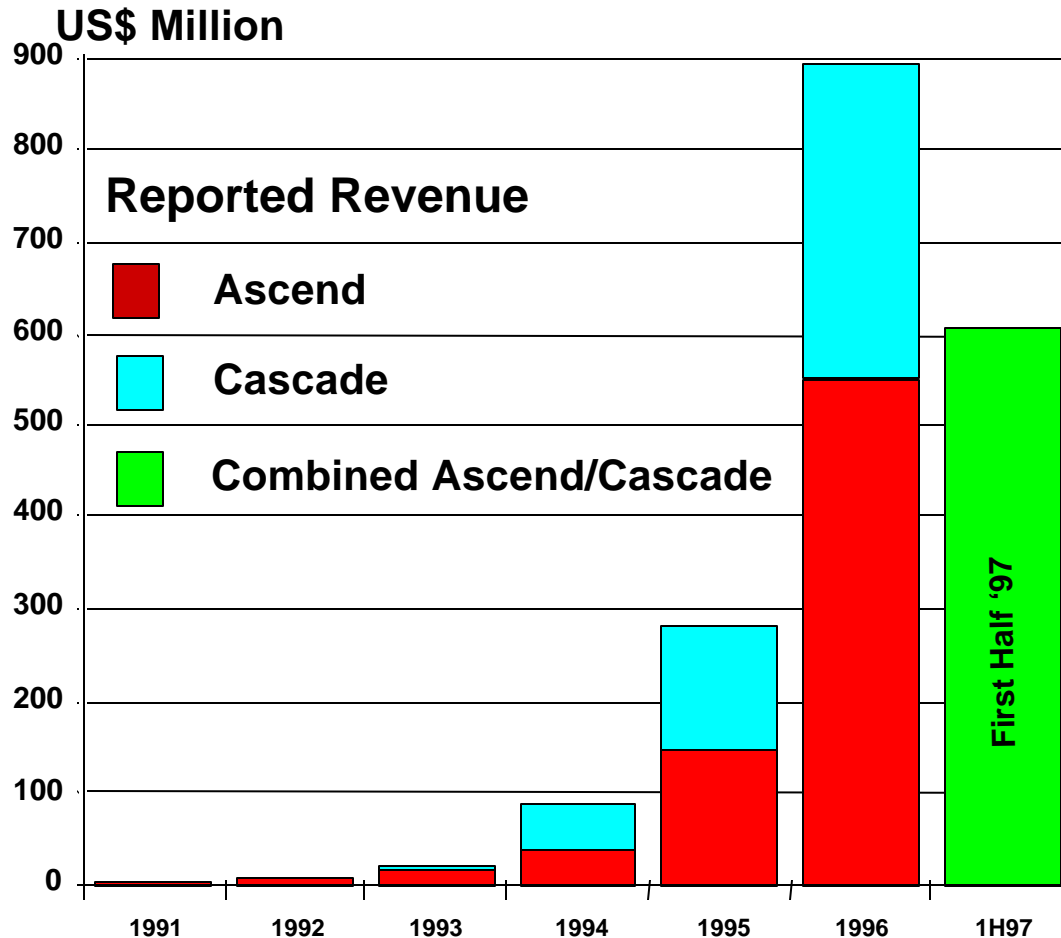
■ International

- ◆ Antwerp, Belgium
- ◆ Dubai, UAE
- ◆ Copenhagen, Denmark
- ◆ Frankfurt & Nuremberg, Germany
- ◆ Hong Kong
- ◆ Johannesburg, South Africa
- ◆ Kuala Lumpur, Malaysia
- ◆ London, UK
- ◆ Madrid, Spain
- ◆ Milan, Italy
- ◆ Paris, France
- ◆ Sophia Antipolis, France
- ◆ Stockholm, Sweden
- ◆ Sydney & Melbourne, Australia
- ◆ Tokyo, Japan
- ◆ Seoul, Korea
- ◆ Singapore

...with distribution and support in over 40 countries worldwide



Global Networking Leader

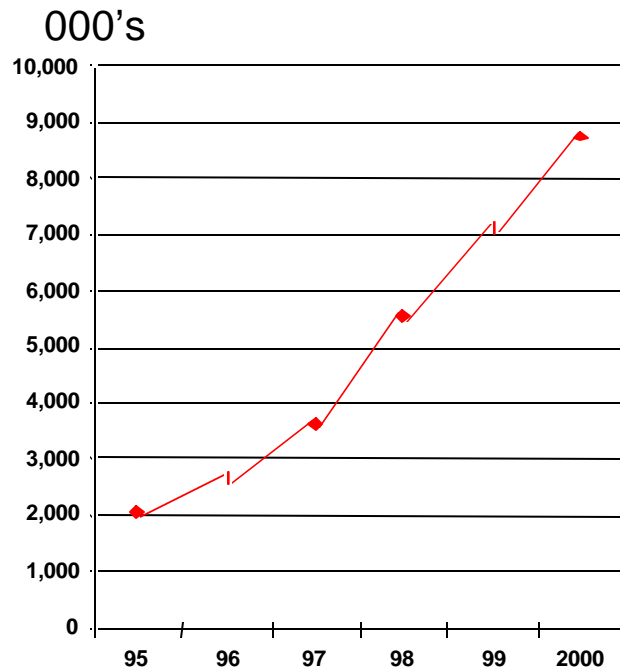


- Spectacular growth over 5 years
- >\$500,000,000 in cash
- Zero Debt
- Outstanding Customer Base

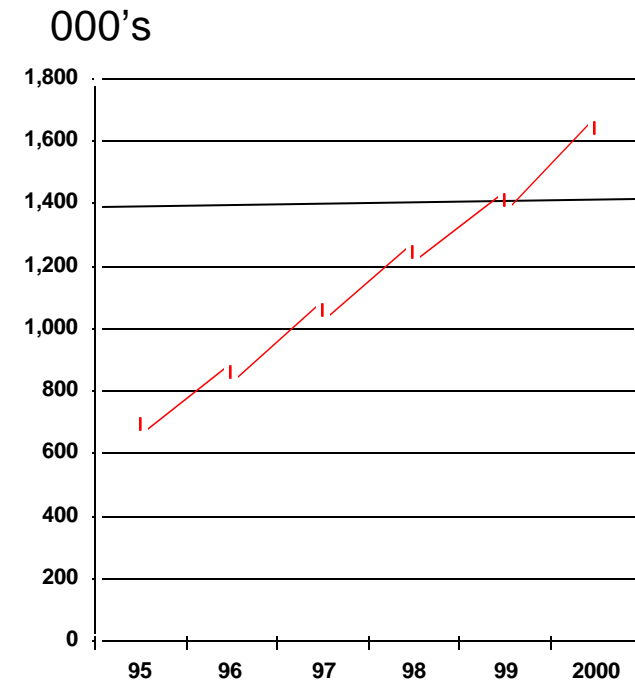
Annualized revenue to exceed US\$1,000,000,000



Remote Networking Enabled By Ascend



Number of International Mobile Workers



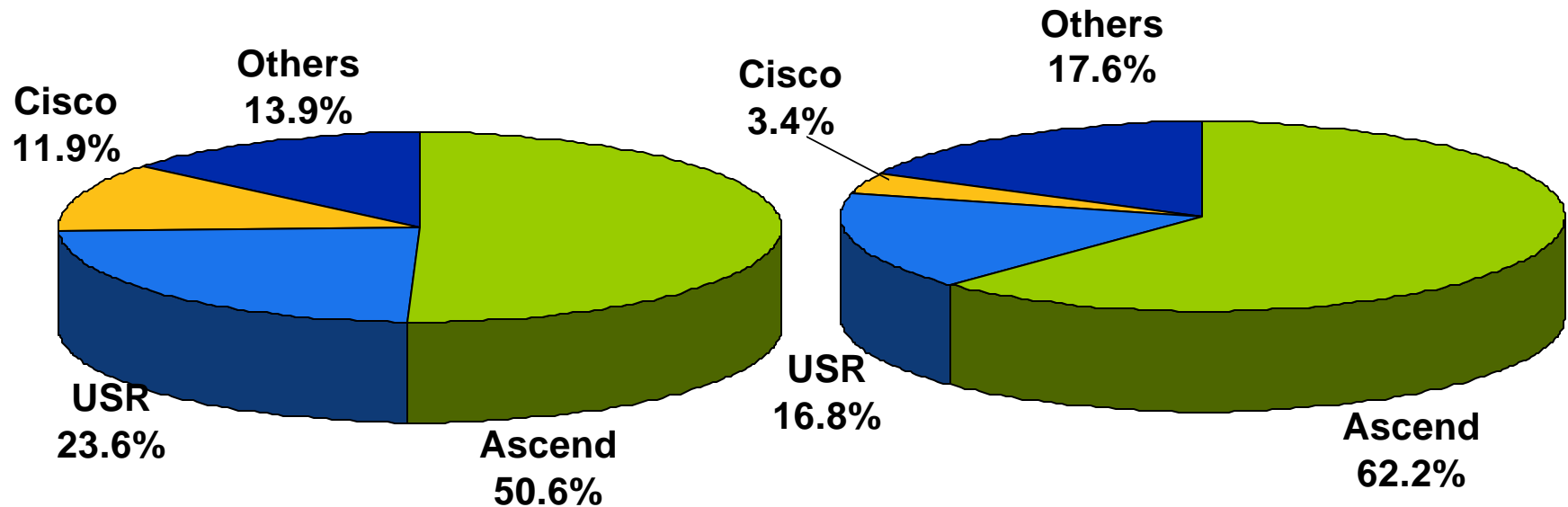
Number of International Teleworkers

- Mobile workers to grow from 3.5 million to almost 9 million by year 2000
- Teleworkers to grow from 1 million to over 1.6 million by year 2000

Mobile Workers and Teleworkers: a significant part of enterprise networks



Leading Global Market Share in Access Concentration



Source: Dell'Oro Group 8/97 Report

**World Wide Market Share
Q2 '97
Async (analog) ports**

**World Wide Market Share
Q2 '97
ISDN PRI ports**



Representative Customers

The largest carriers, enterprises and internet providers implement networking solutions with Ascend

Carriers and Internet Service Providers

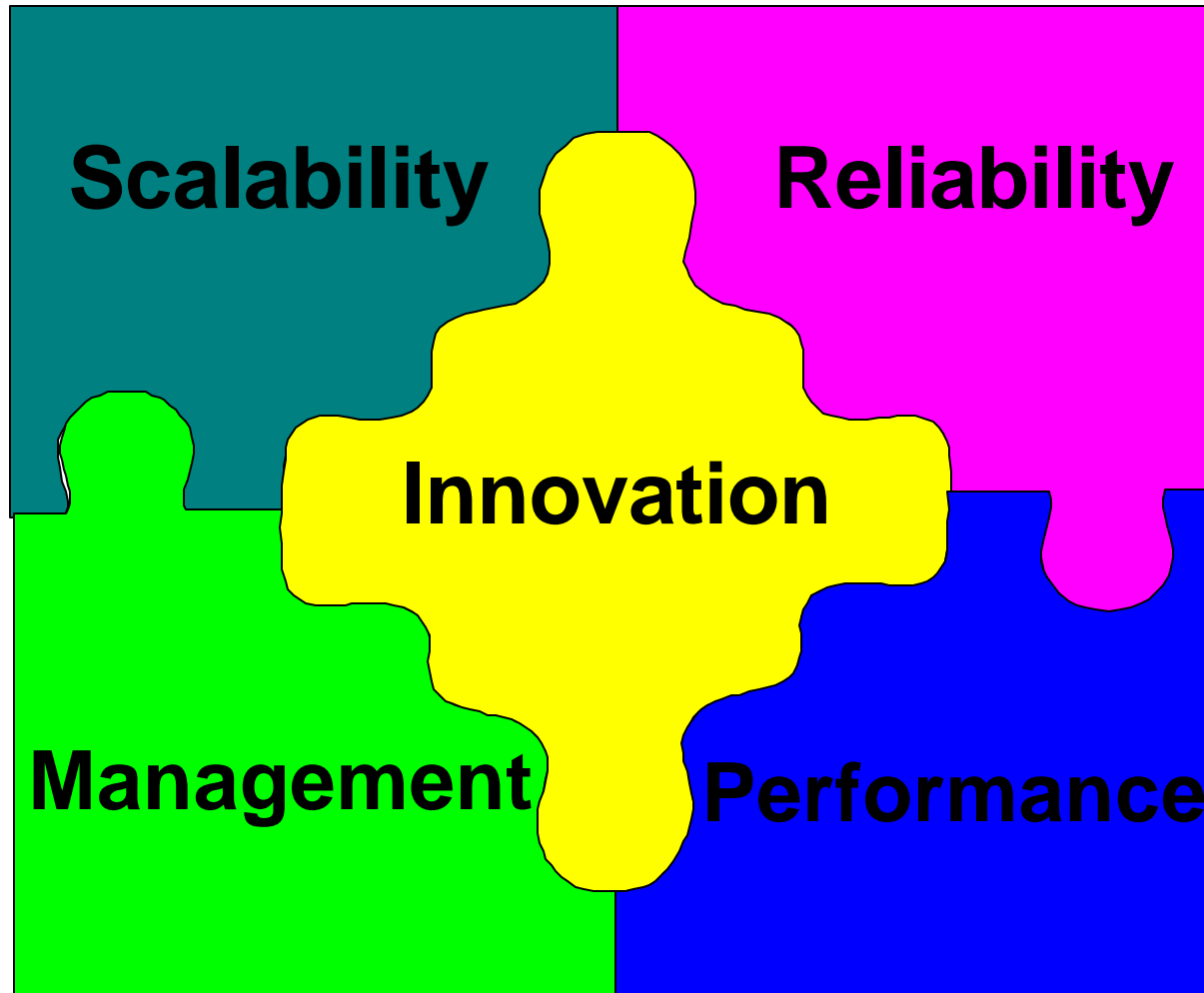
BT	Microsoft Network (MSN)
France Telecom	EUNet (Europe)
Deutsche Telekom	UUNet (Global)
Telefonica de Espana	PSINet (Global)
Telecom Italia	Netcom (Global)
TeleDenmark	Demon Internet (UK)
Telecom Finland	T-Online (Germany)
Unisource	BTNet (UK)
Cegetel	Swiss PPT – Blue Window
Telstra	Oleane (France)
KDD	Hong Kong Supernet
AT&T	Pacific Internet
MCI	Uninet (Mexico)
US Sprint	NTTPC (Japan)
TelMex	IJJ (Japan)

Enterprise

Hewlett-Packard	Bank of America
Dow Jones	McDonald's
Fujitsu	City of Philadelphia
Banksys	Cornell Medical University
Volkswagen	Microsoft
Morgan Stanley	Boeing
Oracle	General Electric
Sun Microsystems	Johnson & Johnson
Mazda Cars	Mattel
Lever Brothers	RR Donnelley
Dell Computer	Paramount Pictures
DuPont	Nintendo of America
Federal Express	The GAP
UBS	The NFL
Visa International	CMP Publications



Ascend Redefines Carrier-Class





Ascend's Complete Product Portfolio

Provisioning
Server

Fault
Management

Billing
Management

Event
Management

Bulk
Statistics

CNM

CMIP

NAVIS™ - Managed Networks

API

Core Switching

ATM



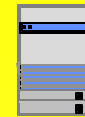
GX-550
CBX 500

IP



GRF Family

Frame Relay



B-STDX
Family

Service Access

ATM



SA 600
SA100

Frame Relay/ISDN/PSTN



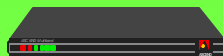
Max
TNT



Max
Family

Remote Access

ISDN / Inverse Multiplexing



Multiband
MAX

ISDN / Frame Relay



Pipeline
Family

Multi-DSL

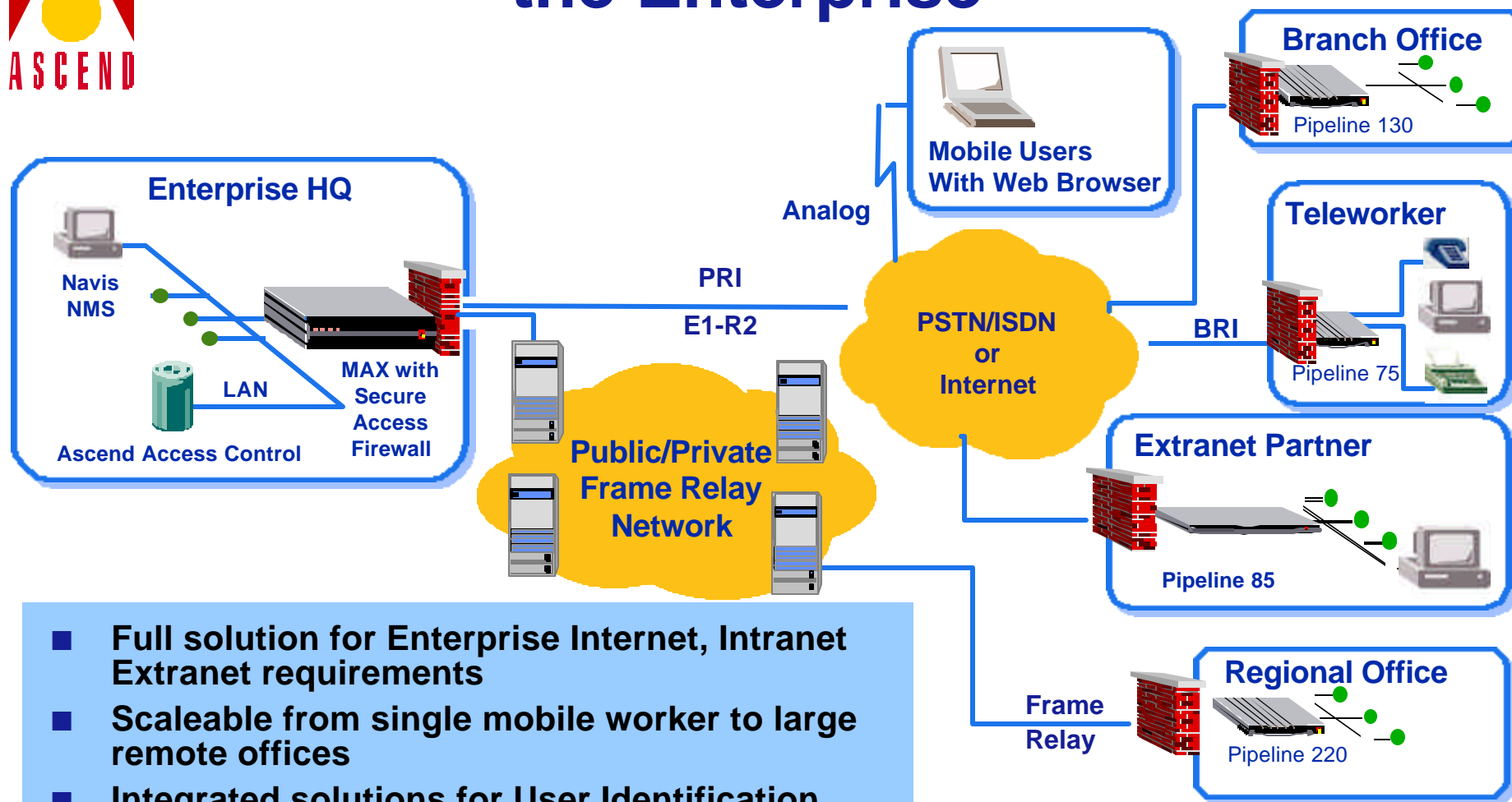


DSL
Pipeline

SECURITY
ACCESS
CONTROL



Scalable End to End Solution for the Enterprise



- Full solution for Enterprise Internet, Intranet Extranet requirements
- Scalable from single mobile worker to large remote offices
- Integrated solutions for User Identification, authentication, authorization and integrated local and remote Firewalls
- Build lease options for Enterprise Core Frame or ATM network



Ascend - The Right Choice

- **Strong Financial Position**
- **Global ability to partner**
- **Technology Leader in Networking Solution for**
 - ◆ Carrier Networks
 - ◆ Internet Service Providers
 - ◆ Enterprise Intranet and Extranet Networks
- **Leadership Through Customer Focus and Time to Market**