

Passport Update

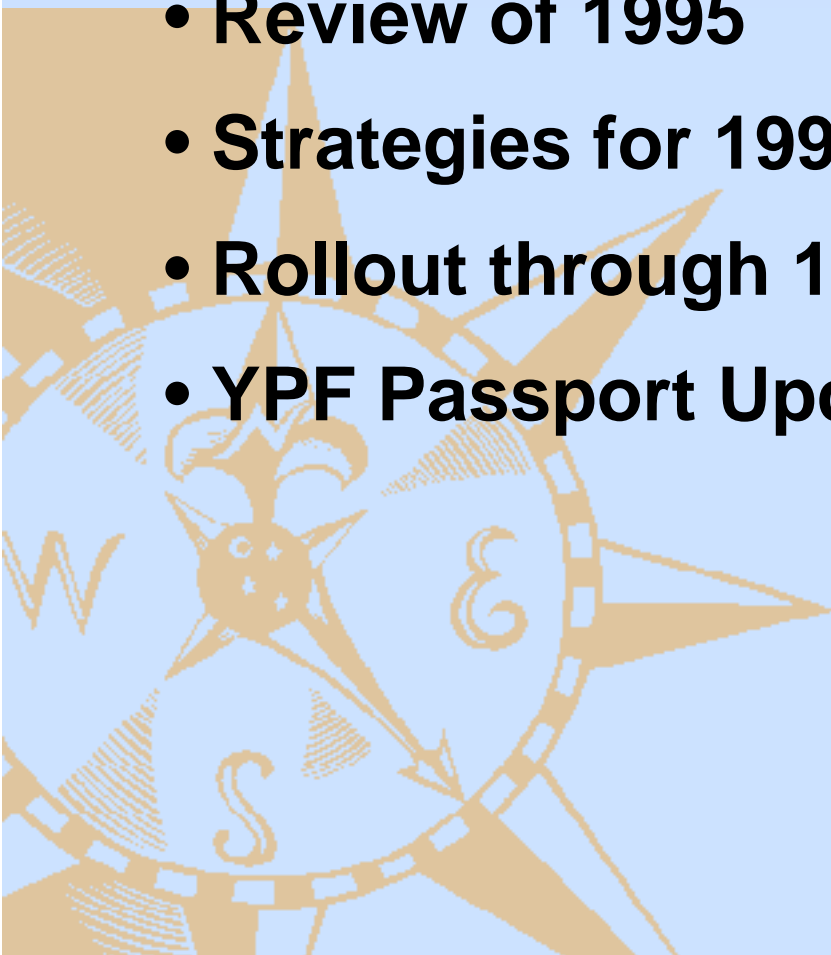
David Hudson

**Senior Product Manager,
Passport Core
david.hudson@nt.com**



Agenda

- **Customer Update**
- **Review of 1995**
- **Strategies for 1996+**
- **Rollout through 1996+**
- **YPF Passport Update**



Magellan: Continued Evolution

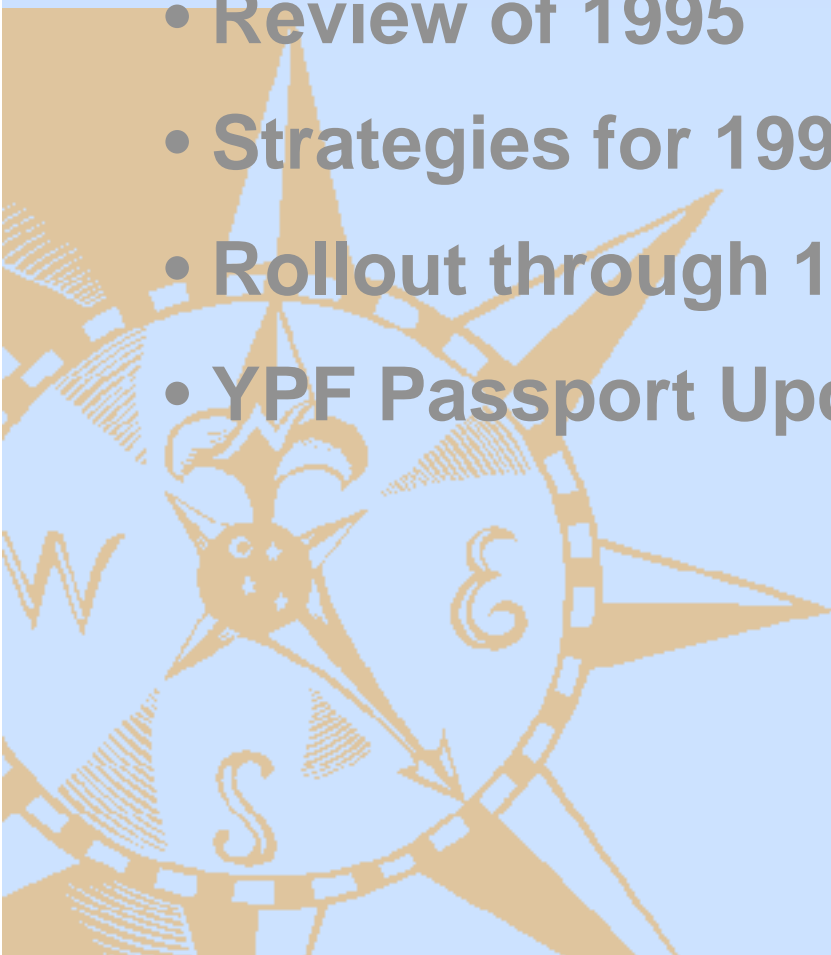
Magellan Networks			
Enterprise Networks		Service Provider Networks	
Internetworking & ATM evolution	Network consolidation	Multiservice offerings	ATM service & infrastructure
<ul style="list-style-type: none"> • ATM switching • ATM adaptation • Multiprotocol routing • IBM/SNA evolution • Open network management 	<ul style="list-style-type: none"> • Voice • Data • Video • LAN traffic • Multimedia • SNA solutions • Network mgmt 	<ul style="list-style-type: none"> • SNA solutions • X.25 • Frame relay • VPN • Network mgmt 	<ul style="list-style-type: none"> • ATM switching • ATM adaptation • ATM services • Open network management

Magellan Core Business

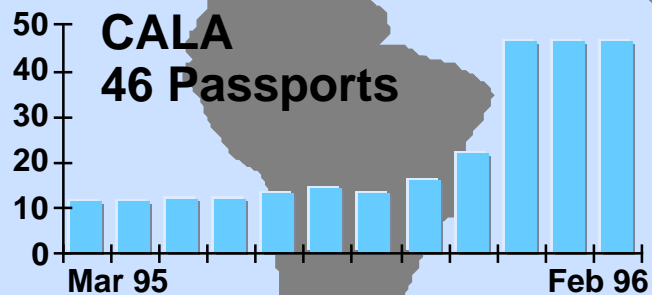
Our stated course remains sure

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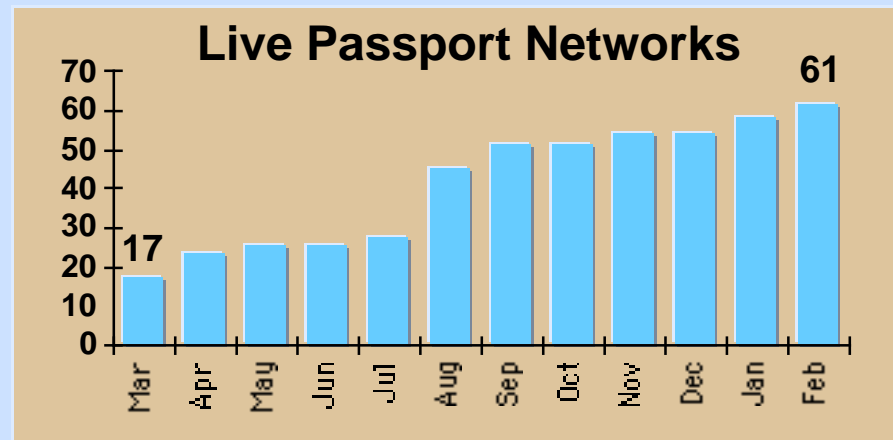
Global Ramp



Global success!

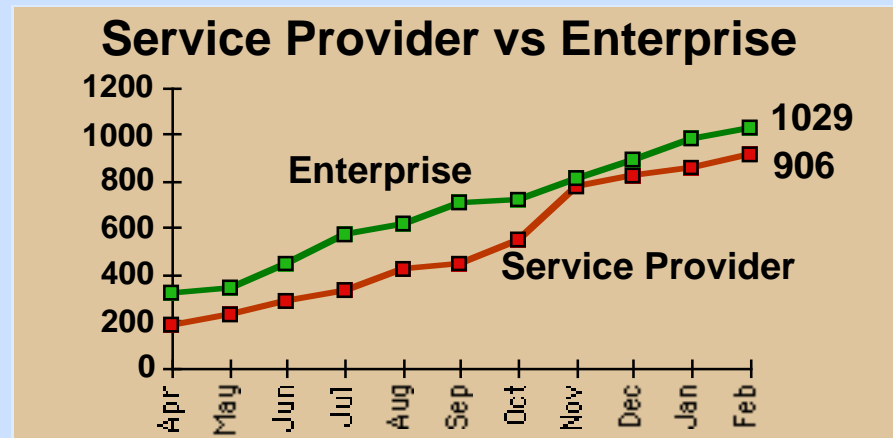
What is Passport Used For?

- **Applications**
 - frame relay UNI **73**
 - DPN-100 interworking **59**
 - HDLC transport **58**
 - voice transport **51**
 - ATM **16**
 - interLAN switching **7**
 - using three or more **55**
- **61 live networks**



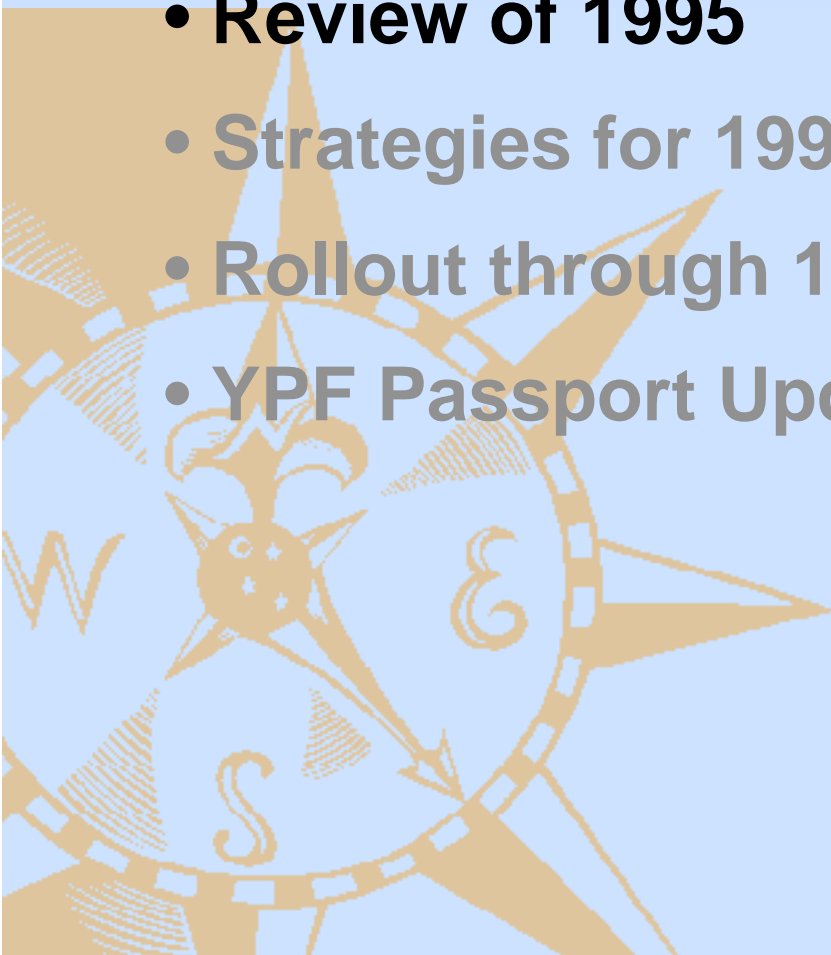
Who Uses Passport?

Customer groups	Number of customers
– finance/Insurance	16
– distributors	14
– manufacturing	10
– utility/resource	6
– transportation	6
– government	5
– education	3
– service provider/VAN	58

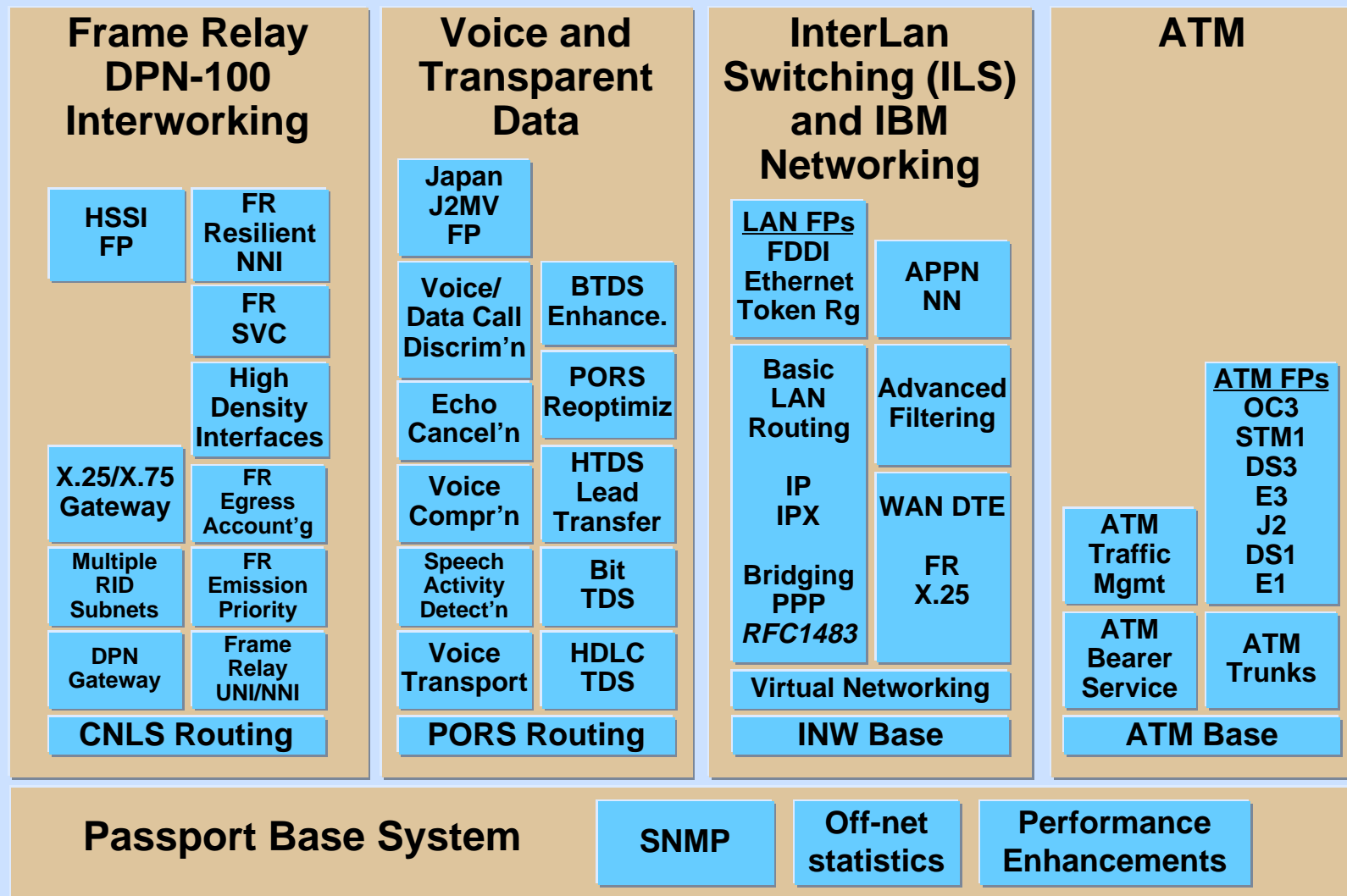


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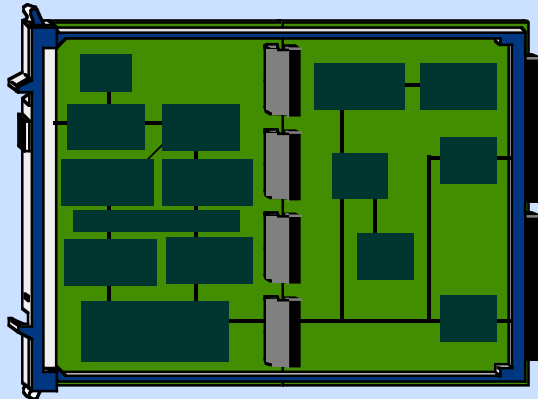
'95 Features as Reported at Inform '95



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- **Notes page only**

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- **Notes page only**

Passport Functional Processors



8-port V.35
8-port V.11
4-port DS1
4-port E1
1-port DS3
1-port E3
1-port 24-chan DS1 voice
1-port 30-chan E1 voice
1-port Japan 2M voice
4-port chan. DS1 (24 DS0/port)
4-port chan. E1 (30 E0/port)

1-port FDDI
6-port 10BaseT ethernet
3-port OC-3/STM1 ATM UNI
3-port DS3 ATM UNI
3-port E3 ATM UNI
3-port J2 ATM UNI
3-port DS1 ATM UNI
3-port E1 ATM UNI
8-port DS1
1-port HSSI
4-port 4/16 Mbit/s token ring
DS1 & E1 ATM AAL1
Channelized DS3
CFP1 (CP + WAN + LAN)
8-port DS1/E1 ATM UNI Inv MUX
CFP2 (CP + WAN)
Multi-port/adv. compression voice
others ...

Available now 1996 customer trials In development

Passport Product Specification

Document Version: Issue 1.0
April 8, 1993

Bell-Northern Research
Box 3511, Station C
Canada K1Y 4H7



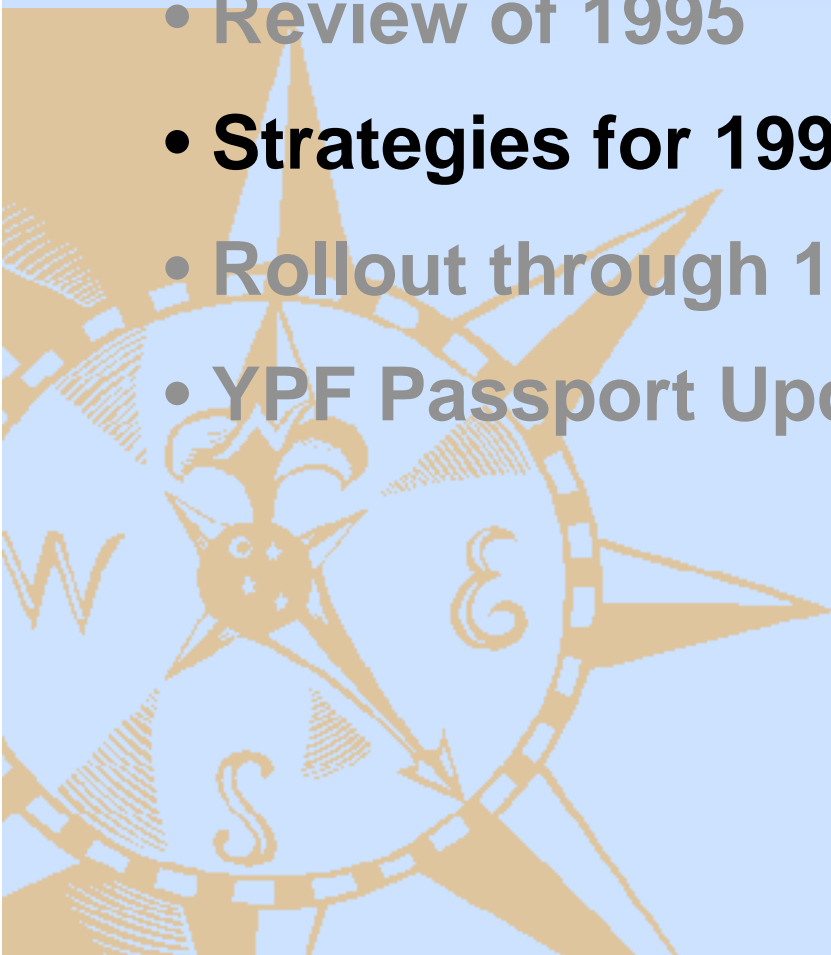
- **ATM ENS**



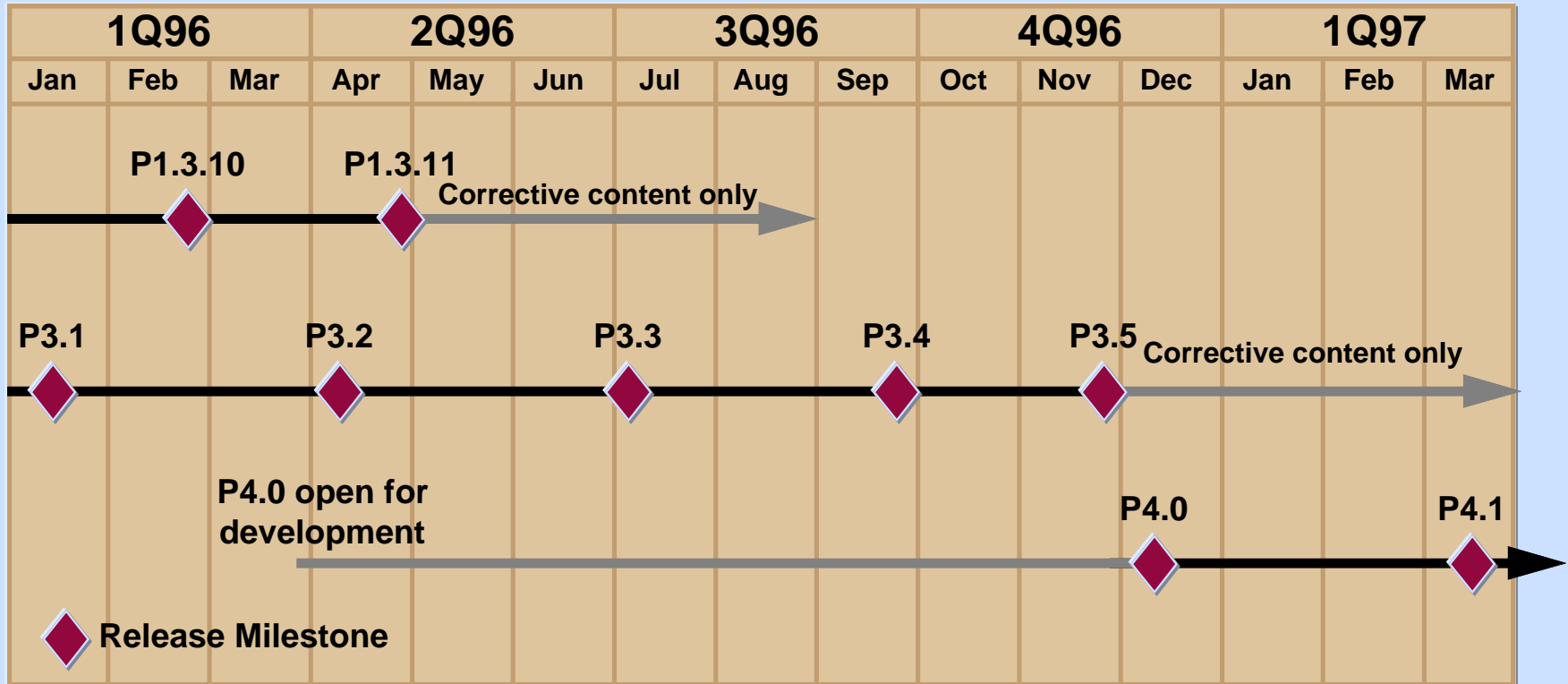
- **Delivered**

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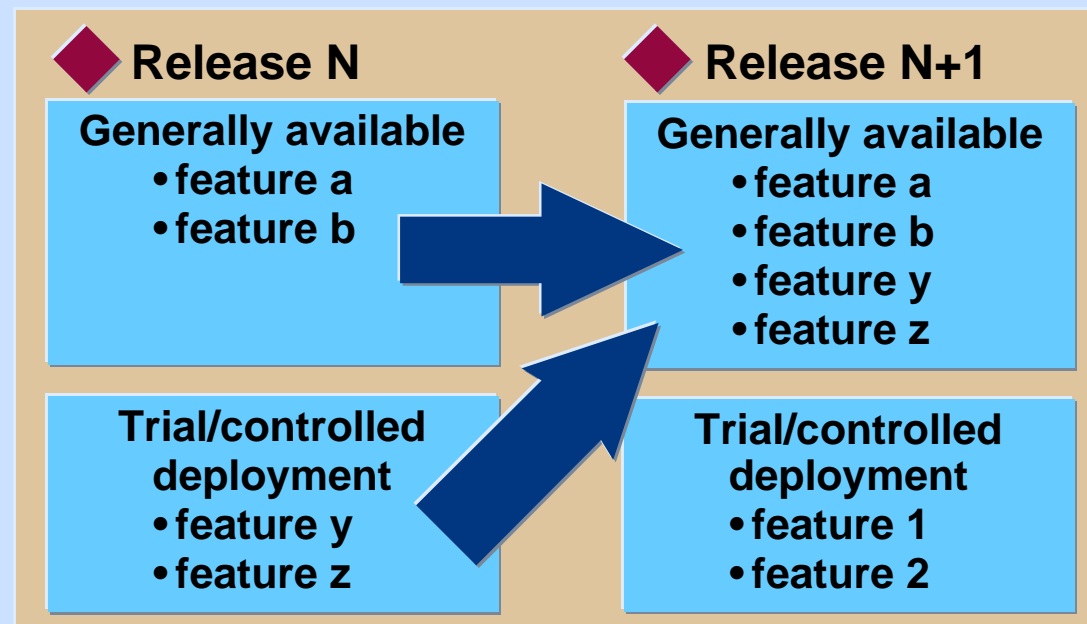
1996 Release Schedule



- Moving to *generic* style releases
- Launch one new *base* generic per year
- Each release planned to include full content of previous release

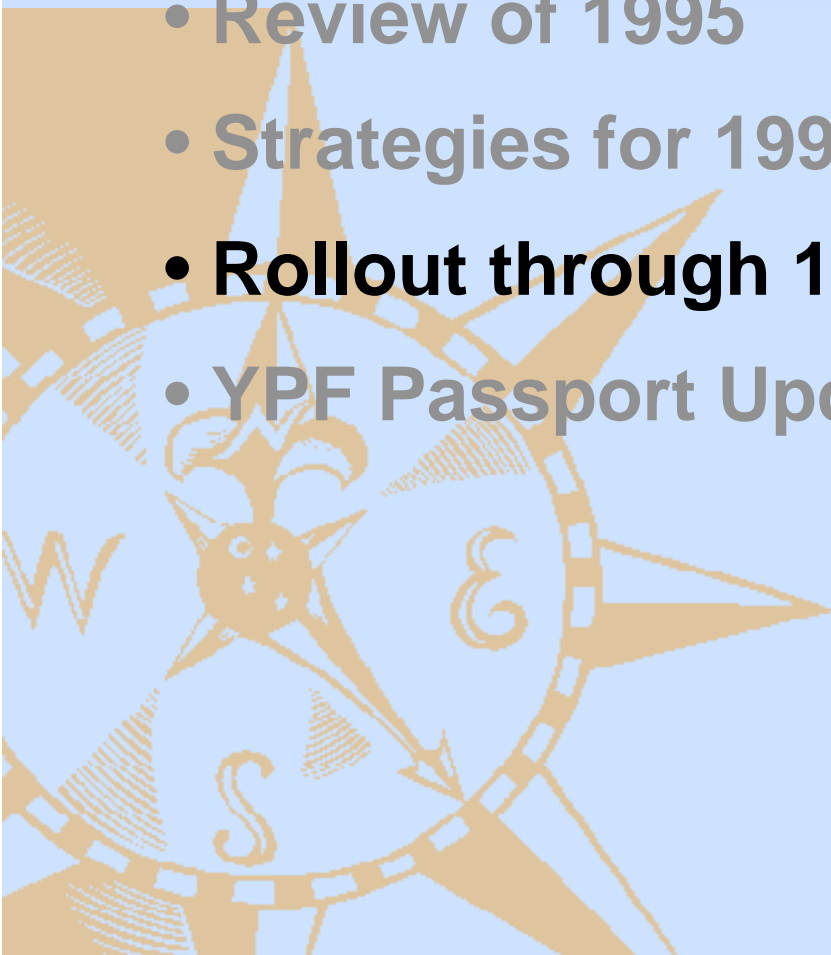
Release Milestones

- **Releases contain generally available and trial (controlled deployment) content**
 - top quality generally available content
 - trial features become generally available in the next release



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Early 1996

- **Brought complete P1 stream to general availability**
 - corrective content and minor enhancements only
- **Brought P3.1 to general availability plus, at trial status**
 - token ring/IP
 - SNMP
- **Launched P3 to general availability**
 - new base, new features
 - higher packet throughput through software

Journey started on P1 - next leg is P3

Mid 1996

- **◆ P3.3 release**
 - general availability planned for all content by P3.4 milestone

Generally available	All P1.3.9 & P3.2 features
Trial/controlled deployment	Fax idle suppression Frame relay DLCI loopback DPN-100 Gateway on DS1c/E1c DPN-100 Gateway over frame relay CP redundancy on Passport model 50 Token ring SRB APPN HPR/DLUr Large network routing enhancements Incremental FMIP operators
Early trials	All P1.3.9 ATM features ATM traffic management

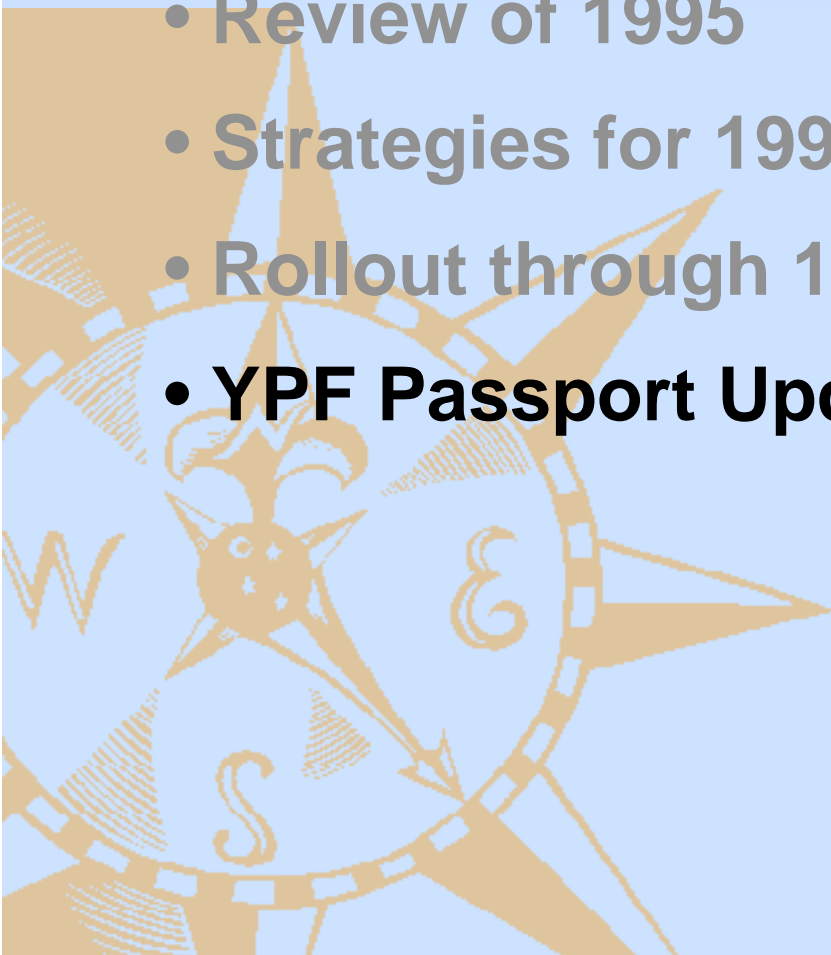
ATM enterprise network switch *IS HERE!*

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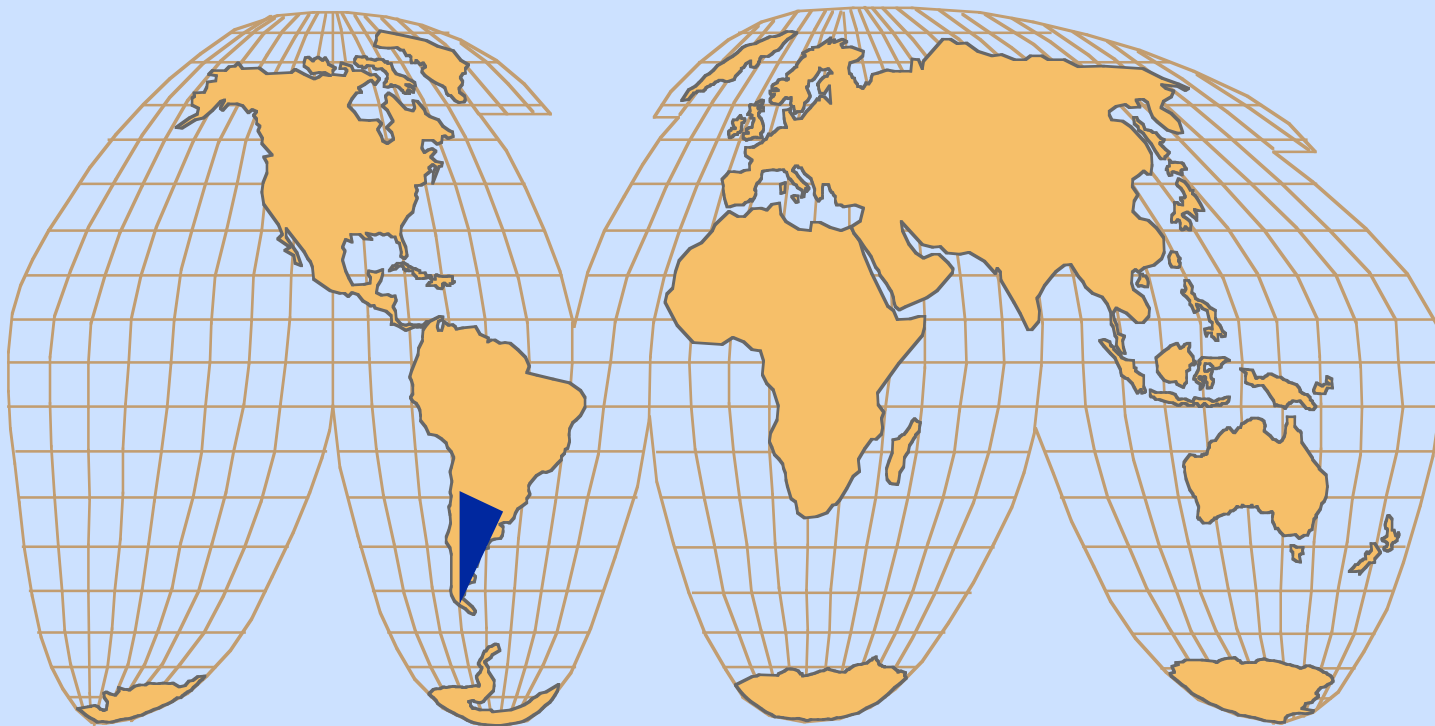


Francisco Cimmino

Manager, Networking and Communications - YPF

CONSOLIDACION GLOBAL DE SERVICIOS UTILIZANDO EL MAGELLAN PASSPORT DE NORTEL

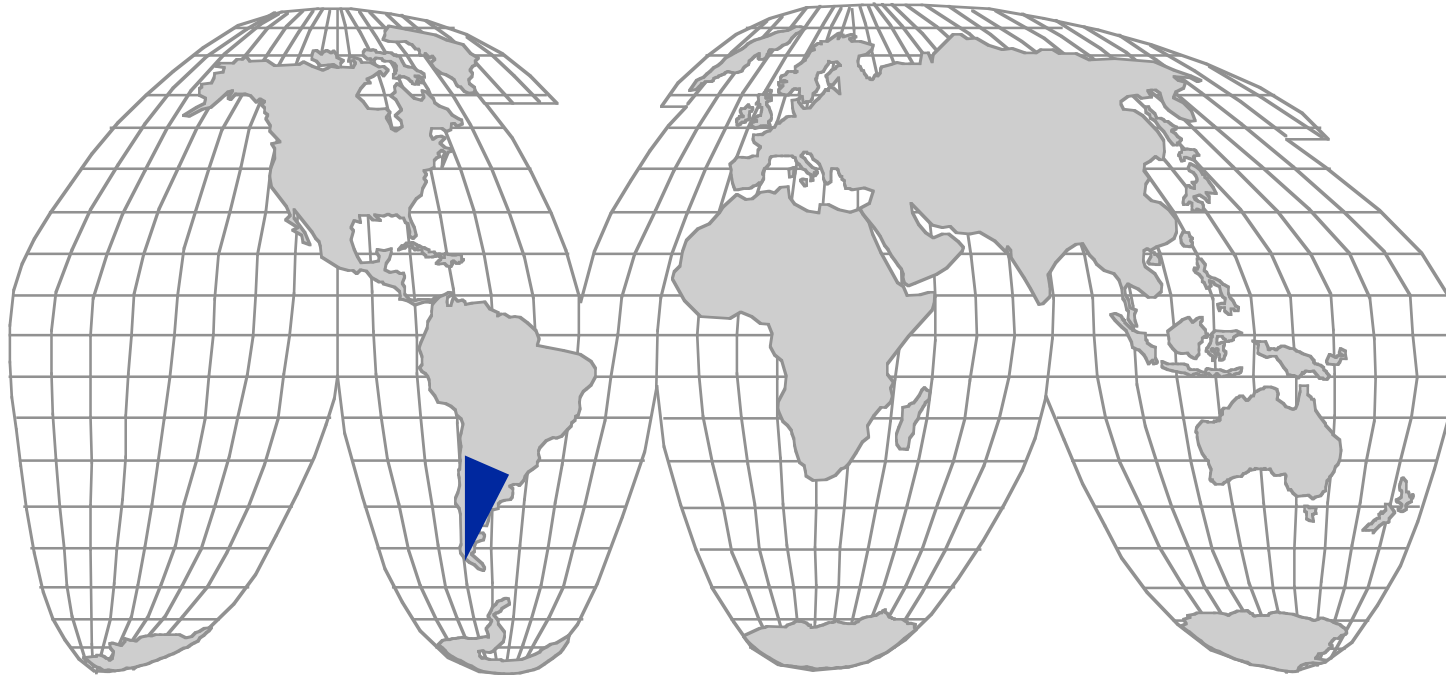
Como resolver las necesidades dinámicas de comunicaciones de una corporación utilizando el Magellan Passport





GLOBAL SERVICES CONSOLIDATION USING NORTEL MAGELLAN PASSPORT

Achieving business excellence through network evolution



Francisco Cimmino
YPF S.A.

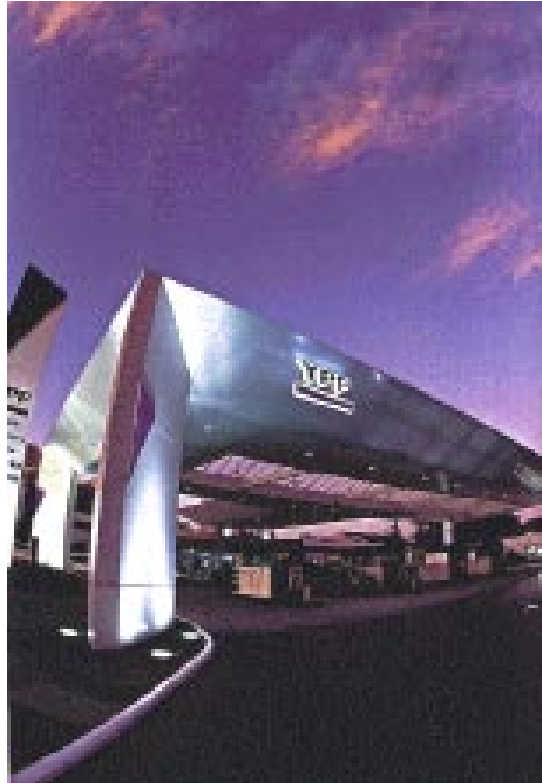
Alejandro Bourg
Ringer S.A.

- YPF business
- Corporate network evolution
- Why Passport?
- Passport test network
- Passport network expansion
- Passport case study
- Conclusions





La Plata refinery



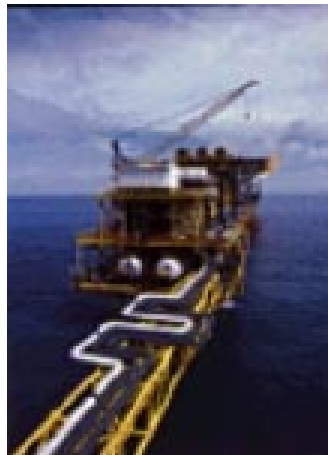
Gas Stations



Analysis



Exploration



Offshore



Oil and gas distribution



Data processing



National Oil and Gas Company
Privatized 1991

1 Company
in Argentina

Employees:

- 1996: 6,000
- 1989: 52,000

**Strategic reorganization
in business units:**

- Upstream
- Downstream
- Corporation

Increasing sales:

- 1994: \$4192M
- 1993: \$4190M
- 1992: \$4094M

Facts:

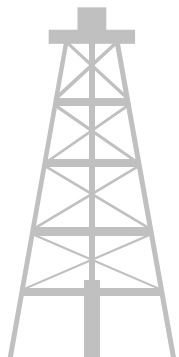
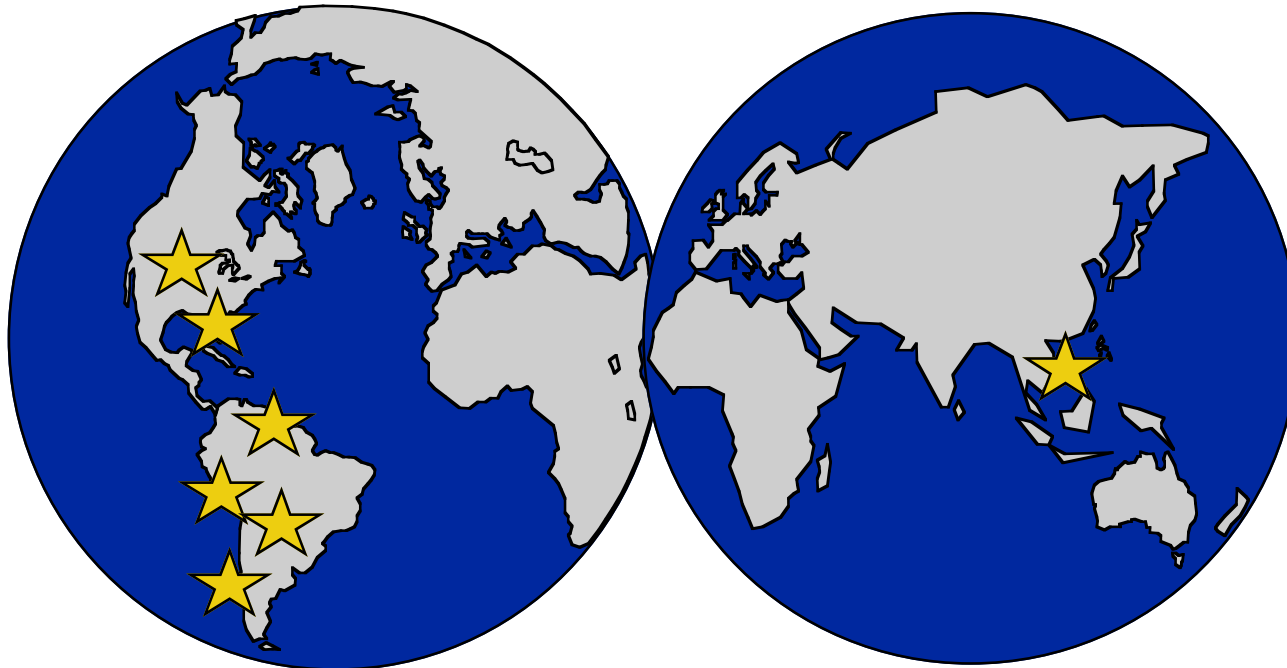
- 2740 Gas Stations
- 4 Refineries (the biggest in Argentina)
- 2 Petrochemical Plants

International expansion:

- NYSE
- Upstream: Maxus
- Downstream: YPF



United States - Indonesia - Bolivia - Ecuador - Venezuela - Chile

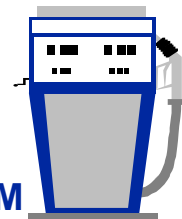


UPSTREAM

MAXUS

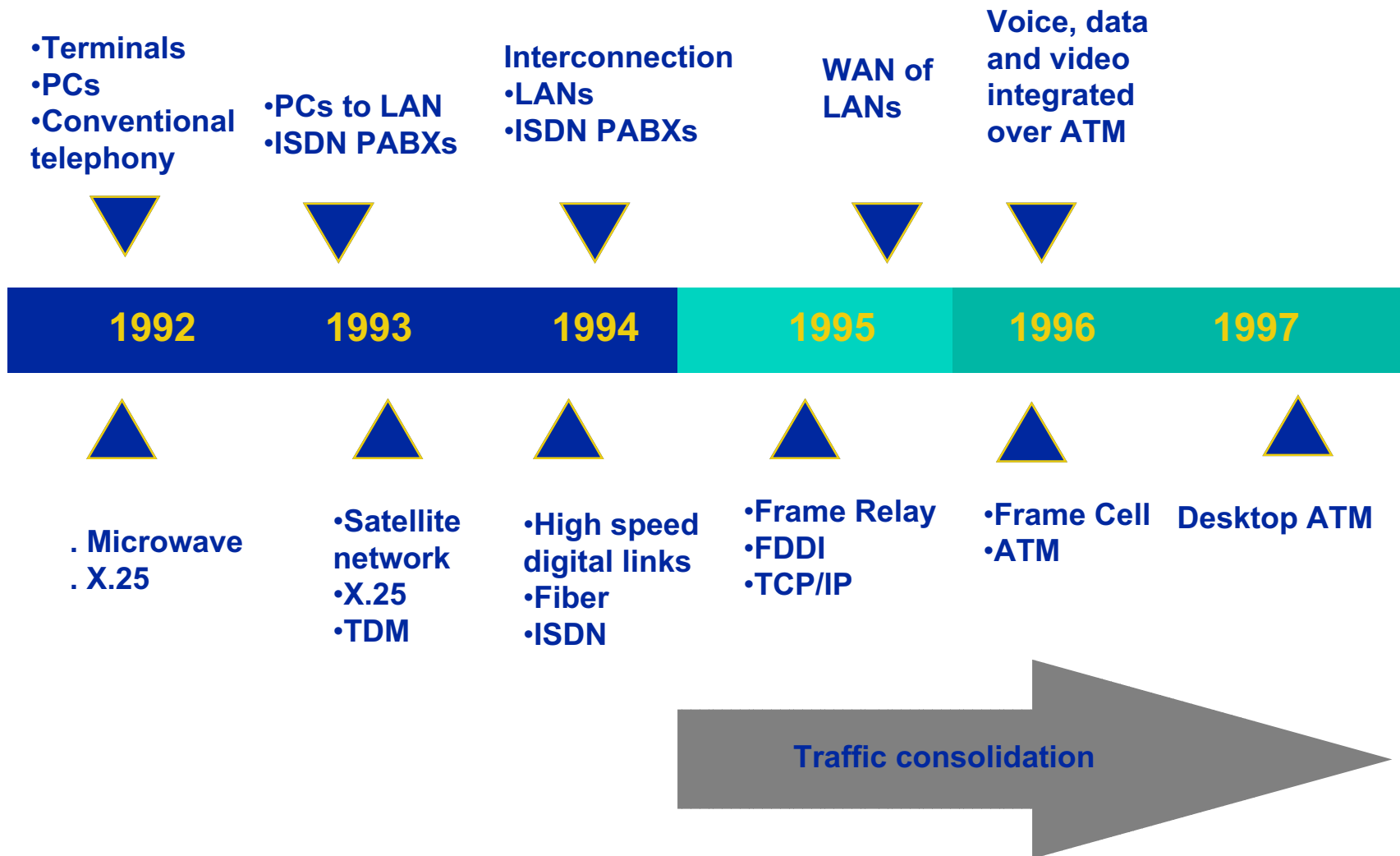
Since June 1995

Oil reserves: + 19%
Crude production: + 20%
Gas reserves: + 10%
Gas sales: + 15%

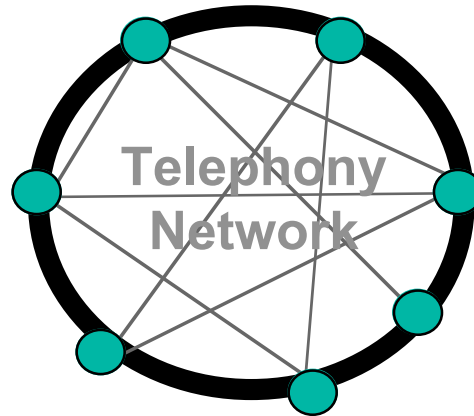


DOWNSTREAM

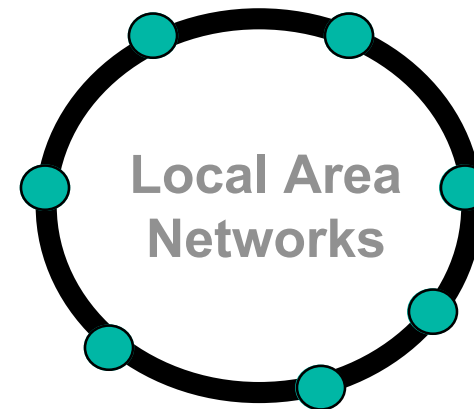
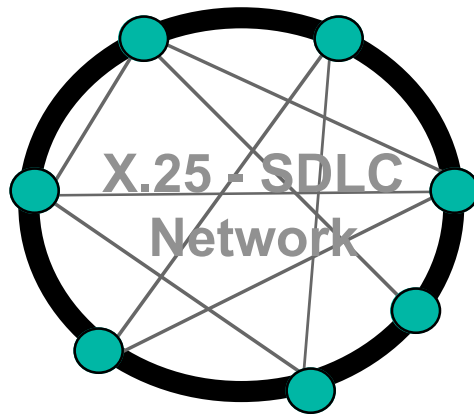
YPF



1991



- Analog lines
- Basic network administration



Underuse of bandwidth, low network flexibility

Services already in the network:

- X.25
- SDLC
- Voice
- LAN

Potential services:

- Video conference

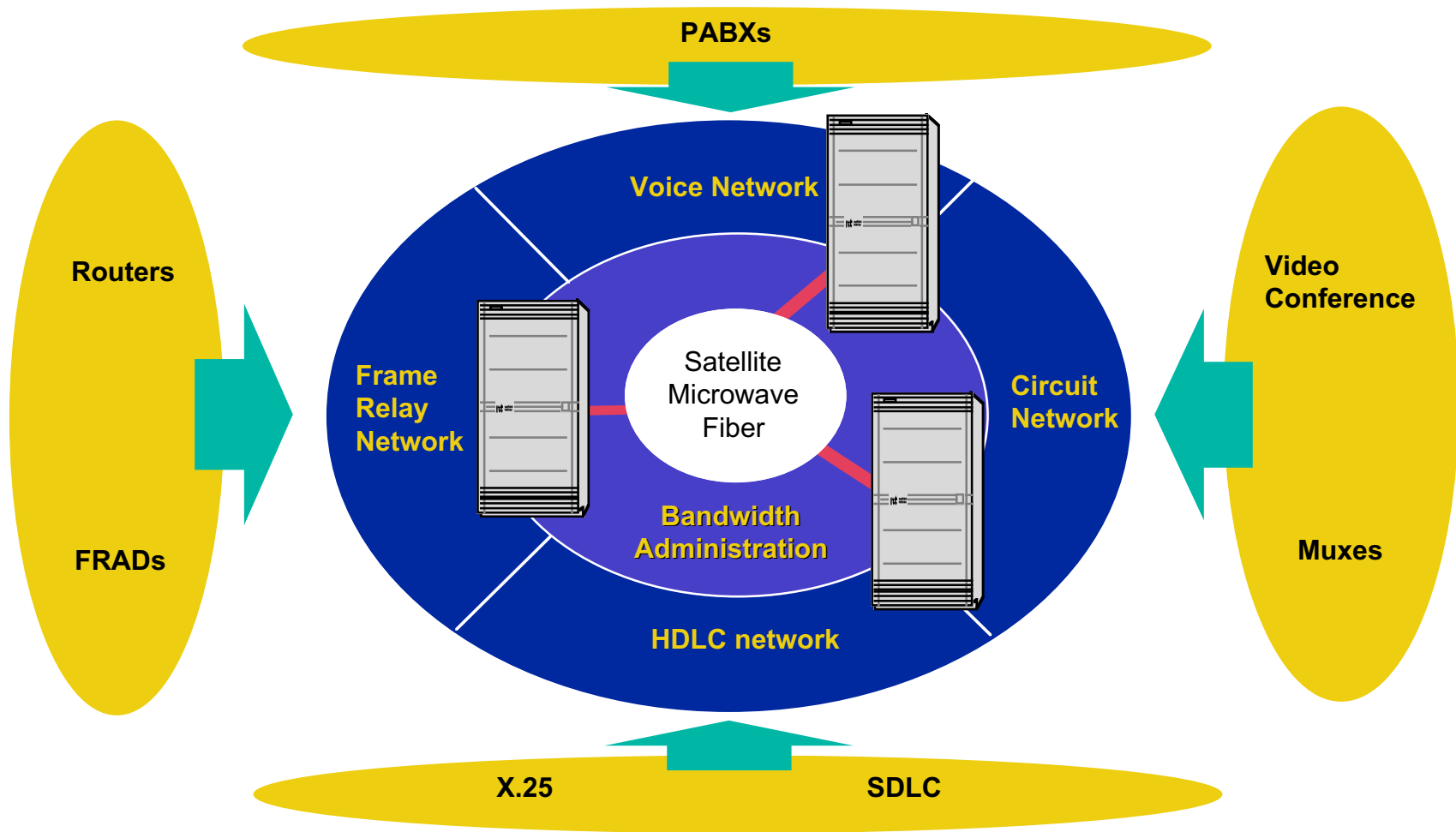
Evolution of transport layer:

- Own microwave digital network
- Satellite services
- Fiber

Corporate transformation:

- From national to international
- Lowering costs
- Big needs of flexibility in topology and services
- New software applications

- Bandwidth administration
- Traffic consolidation
- Collapsed LAN backbone
- Integrated network management



Bandwidth administration, high network flexibility

Challenge

Identify Technology

Find Partner

Passport

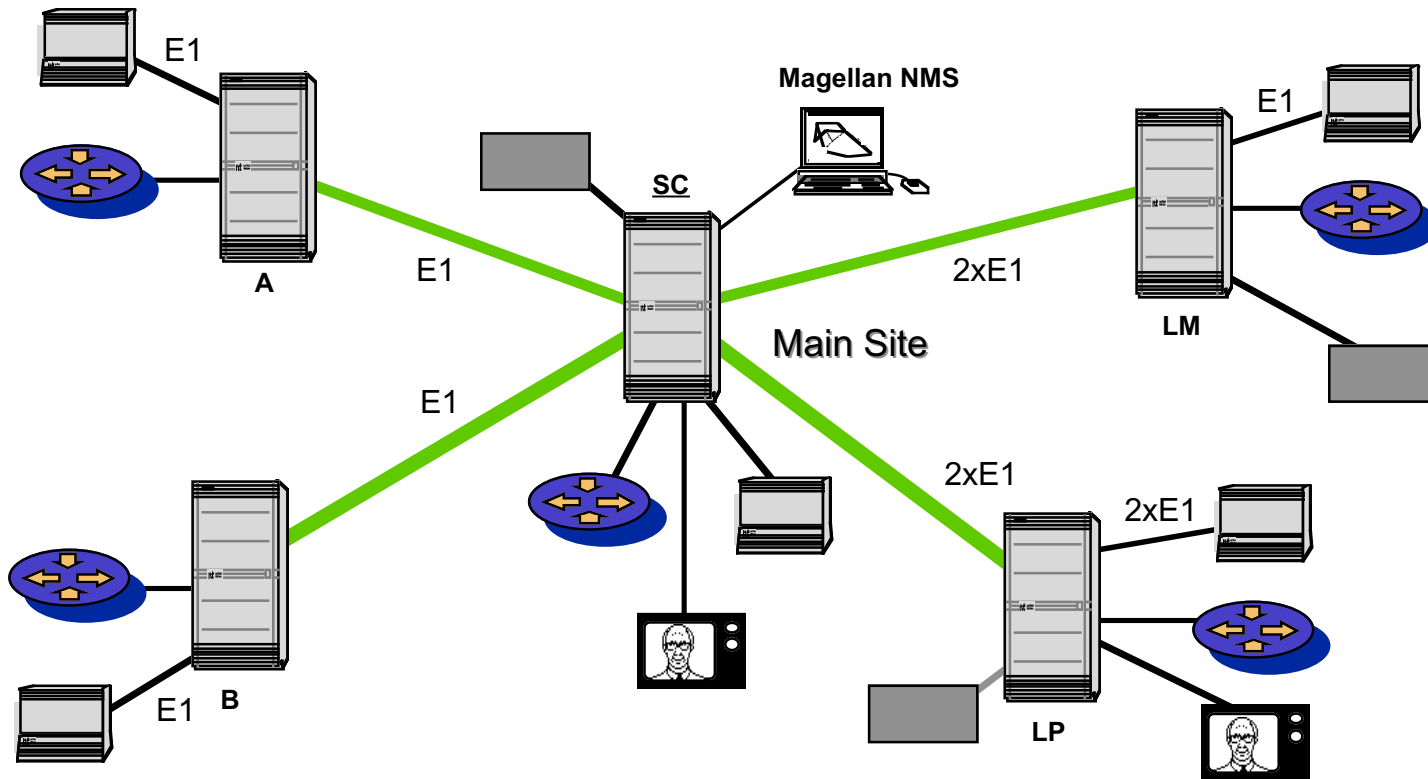
- Bandwidth administration
- Traffic consolidation
- LAN integration
- Management system
- High integration with existing Meridian network
- Known vendor
- Voice transport with compression and silence suppression
- Frame Relay
- Video conference
- HDLC transparent
- ATM
- Family of products from packet switching to ATM
- Technology leadership

Nortel

- Technology excellence
- Product marketing, engineering and sales support..
- Global engineering support: field trials.
- Letter of collaboration between Northern Telecom and YPF (Jim Long - Juan Angel Rodriguez. August 26, 1994).

Ringer

- Known provider for implementation of private ISDN network.
- Local support in Argentina for Magellan and Meridian networks.
- Engineering, installation, operation and maintenance.
- Local partner.



Note: test network included DPN-100 for CSRM and packet switching not shown in picture.



Routers: Frame Relay



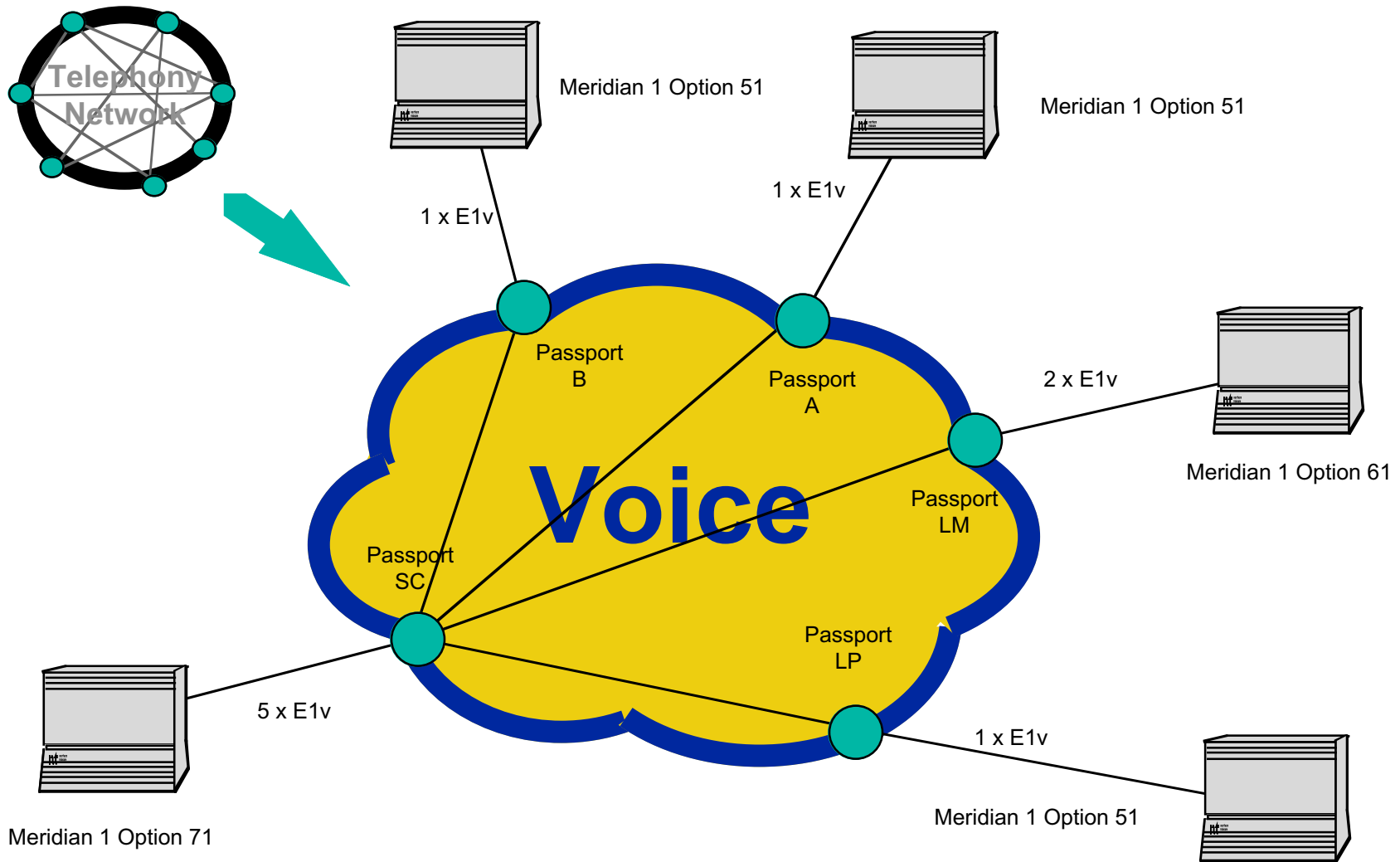
Video: Bit Transparent

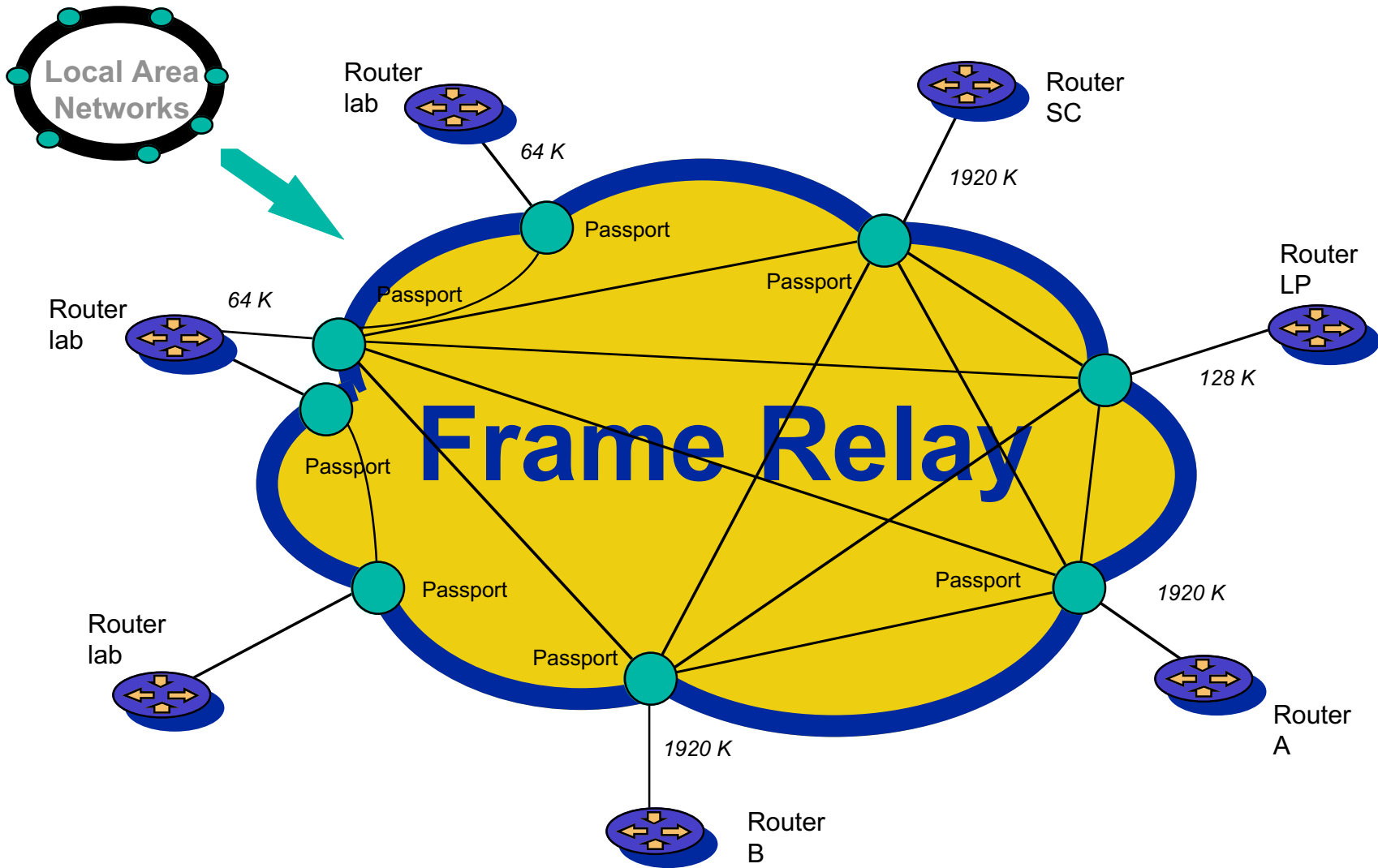


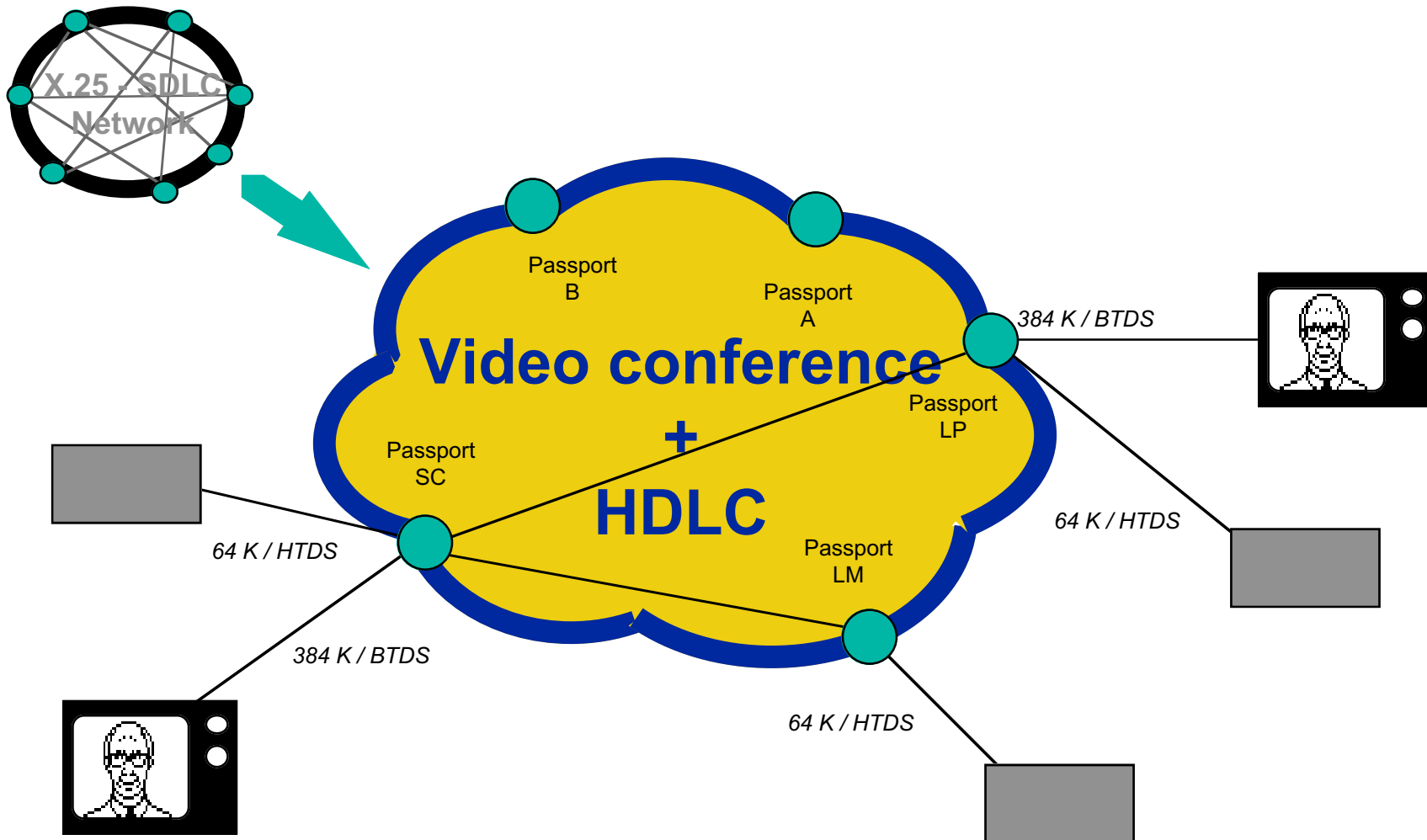
PBX: Voice Transport

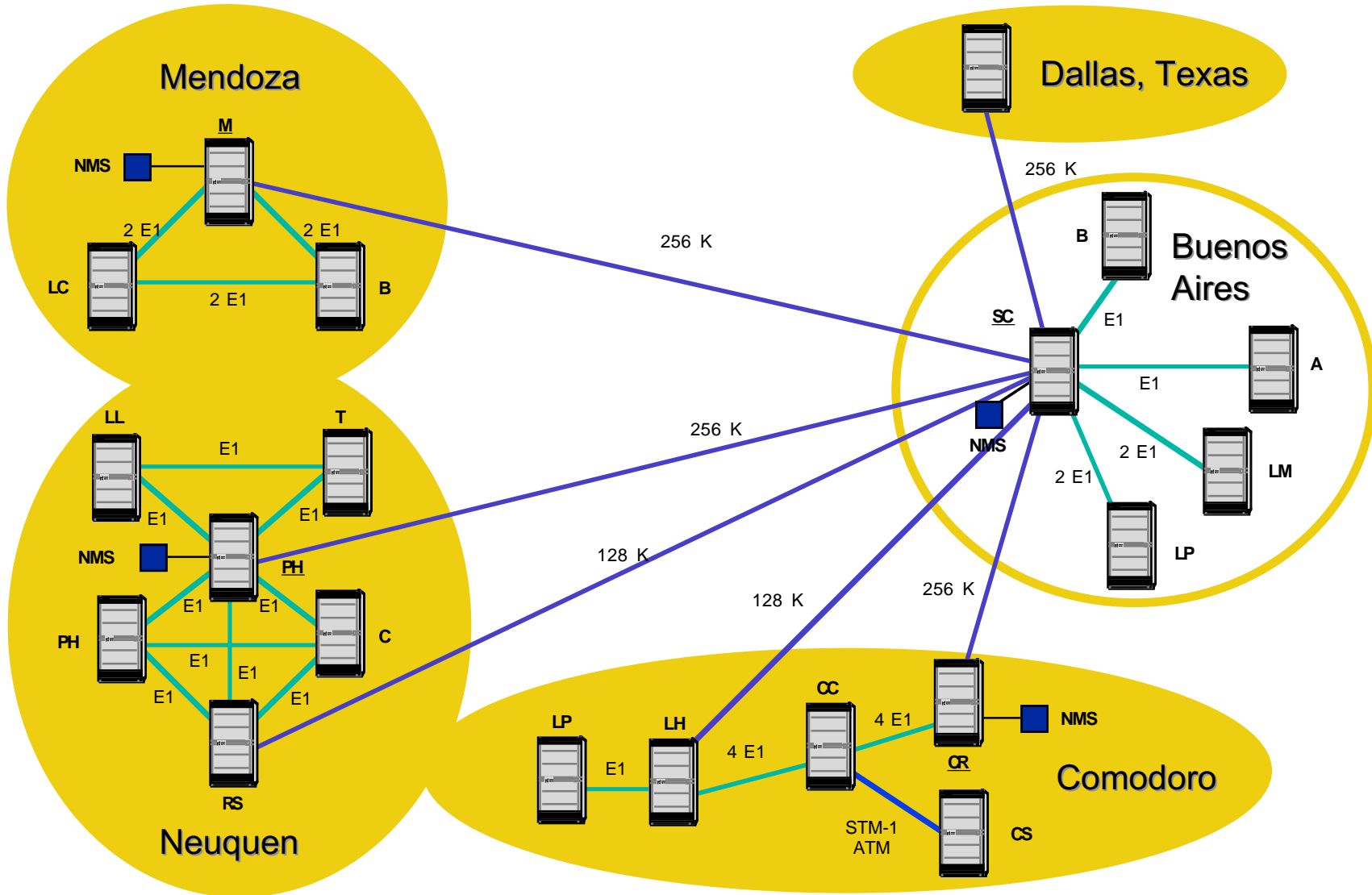


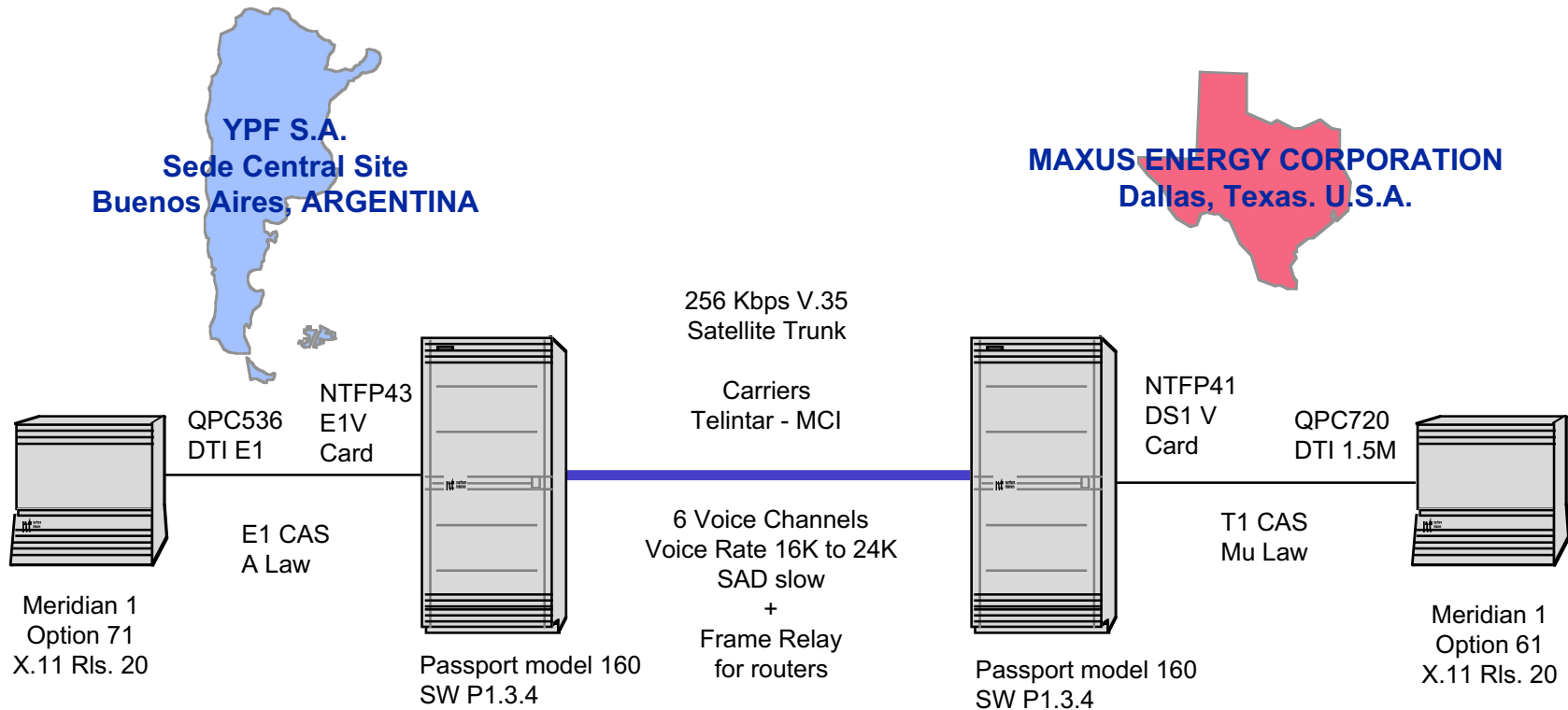
Packet Switches: HDLC Transparent











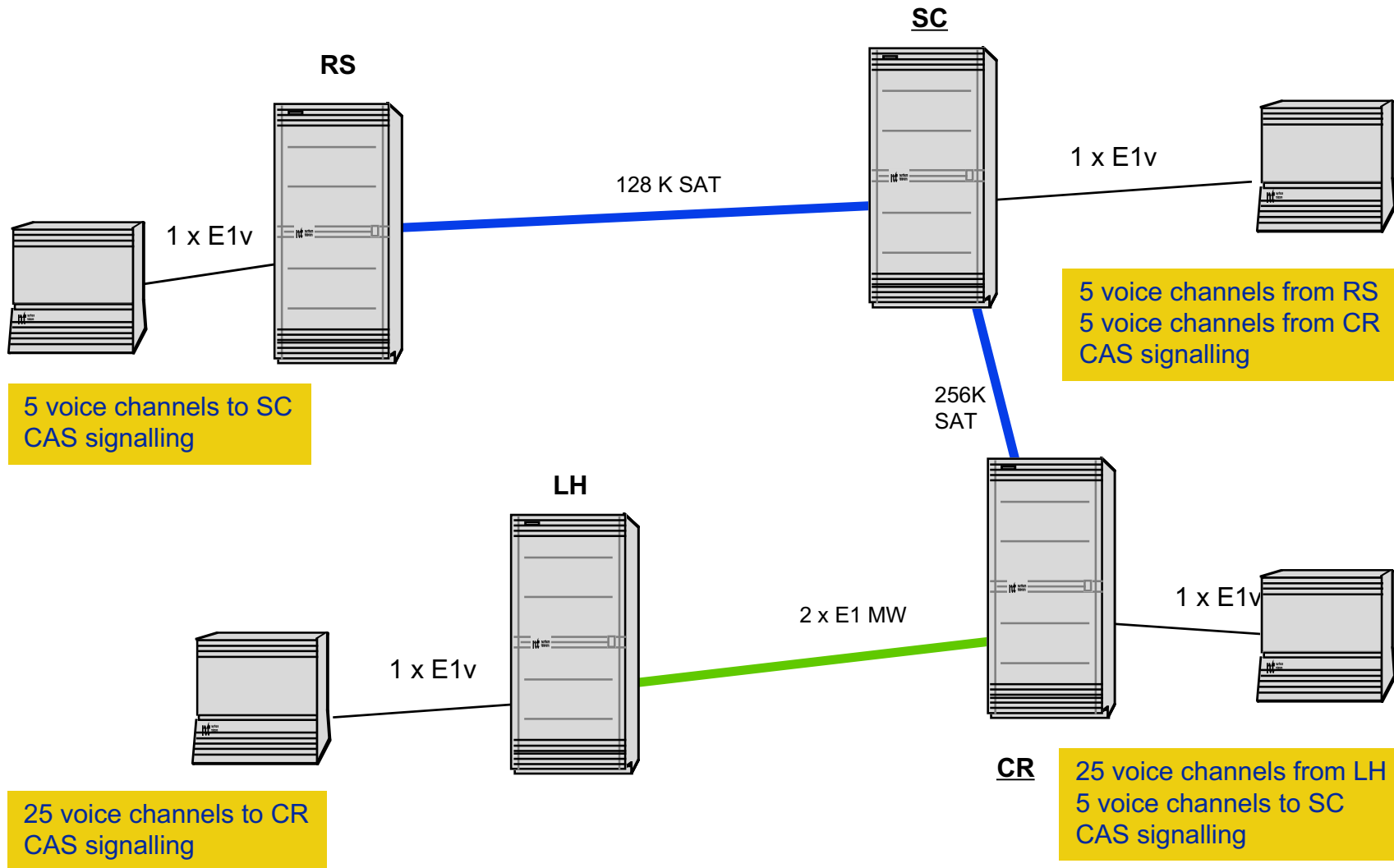
Passport Voice Features

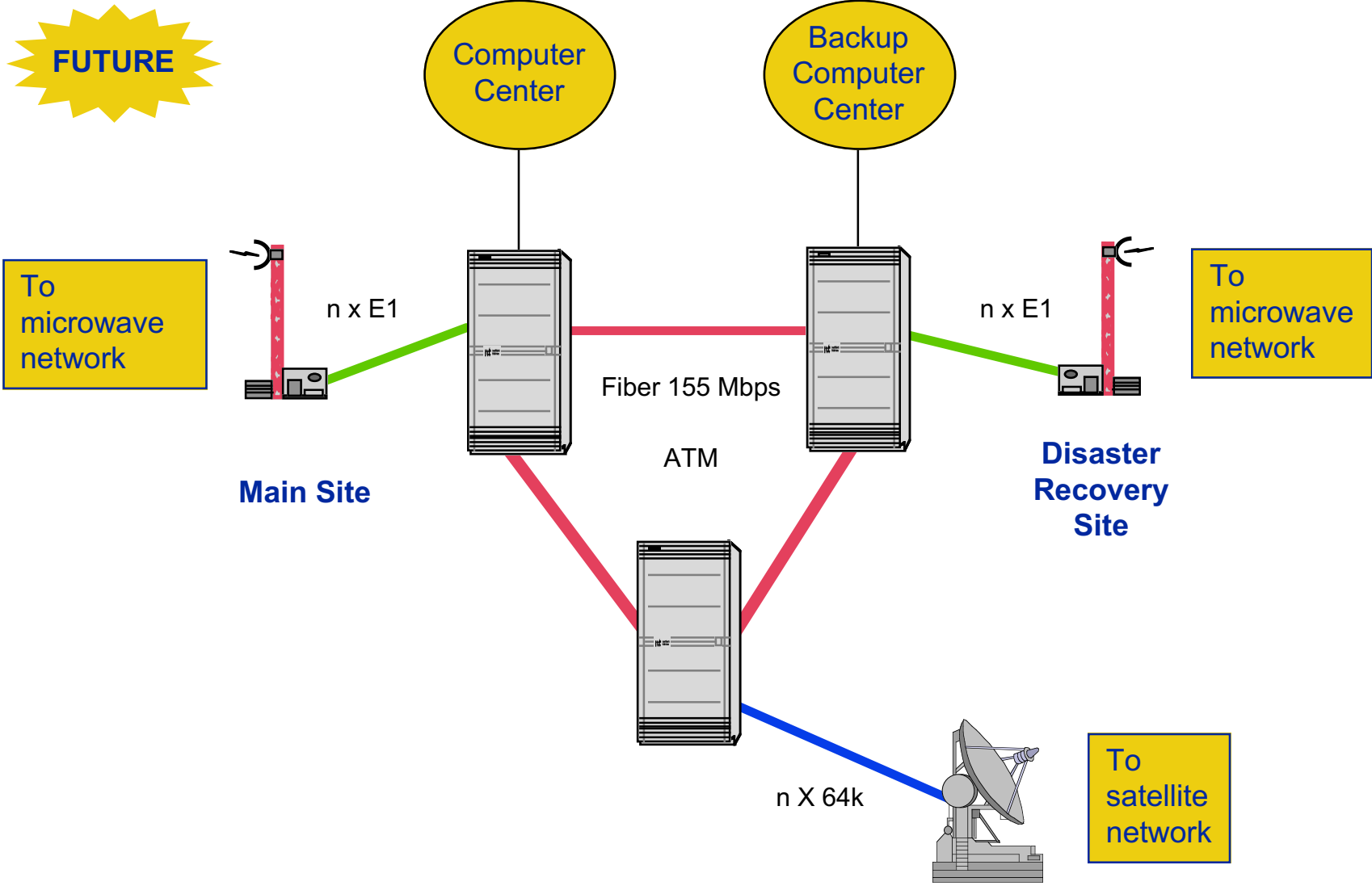
- Passport adapts A-Law to u-Law.
- Passport adapts 64 to 56 Kbps Channels.
- Passport transports CAS signalling.
- Passport translates E1 CAS to T1 ESF CAS:
(E1 idle 1001 - DS1 idle 0000)
(E1 sez 0001 - DS1 sez 1111)

Customer benefits

- Keep PBX provisioning simple at each site.
- Keep sparing simple.

(International with E1 American with DS1).





- We achieved planned goals
- We confirmed the strength of Passport
- We are using leading technology
- We found the way to smoothly migrate to ATM
- We generate the technological platform to make business evolve

