

Magellan Passport: ATM Applications

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Passport ATM Product Manager

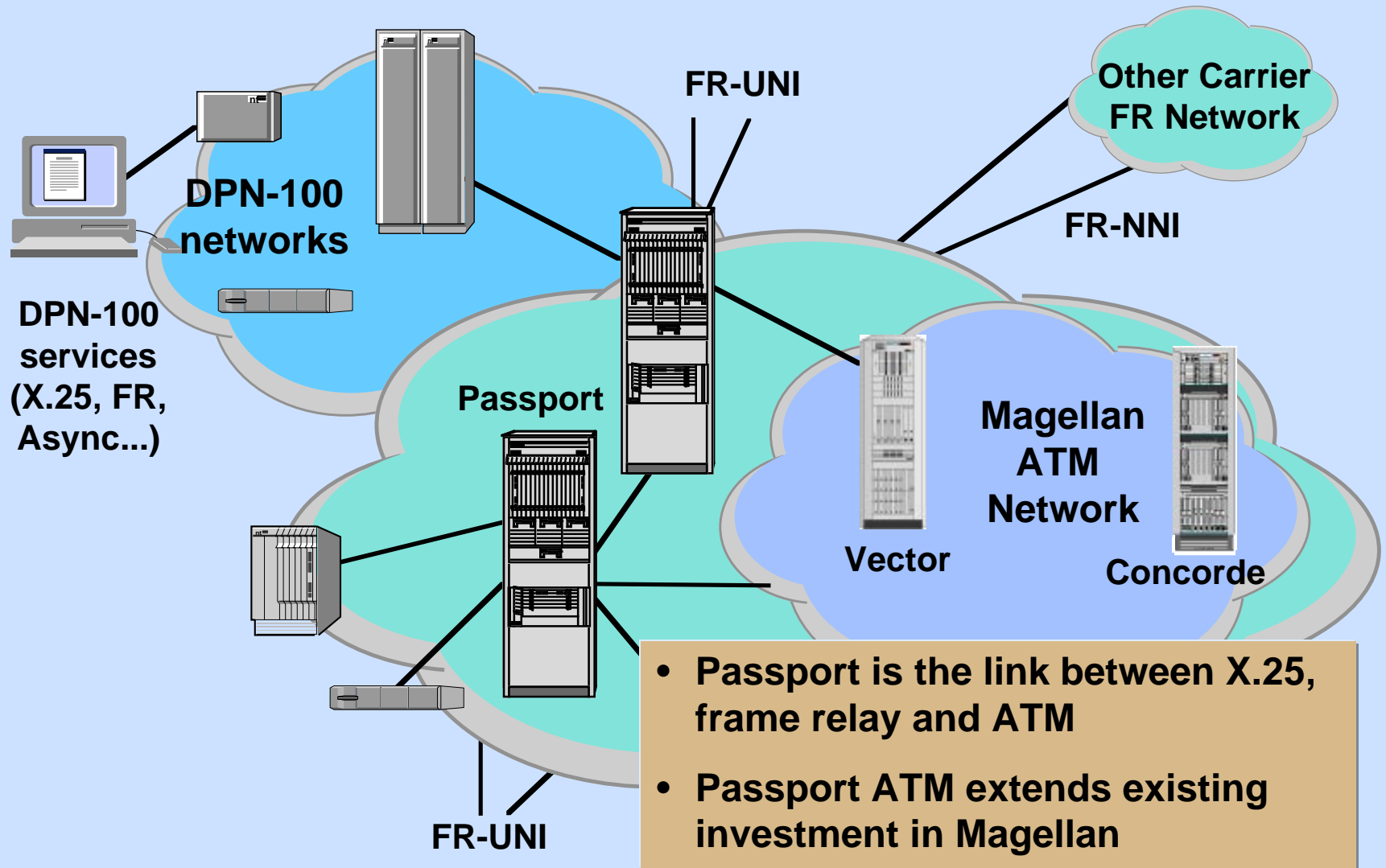
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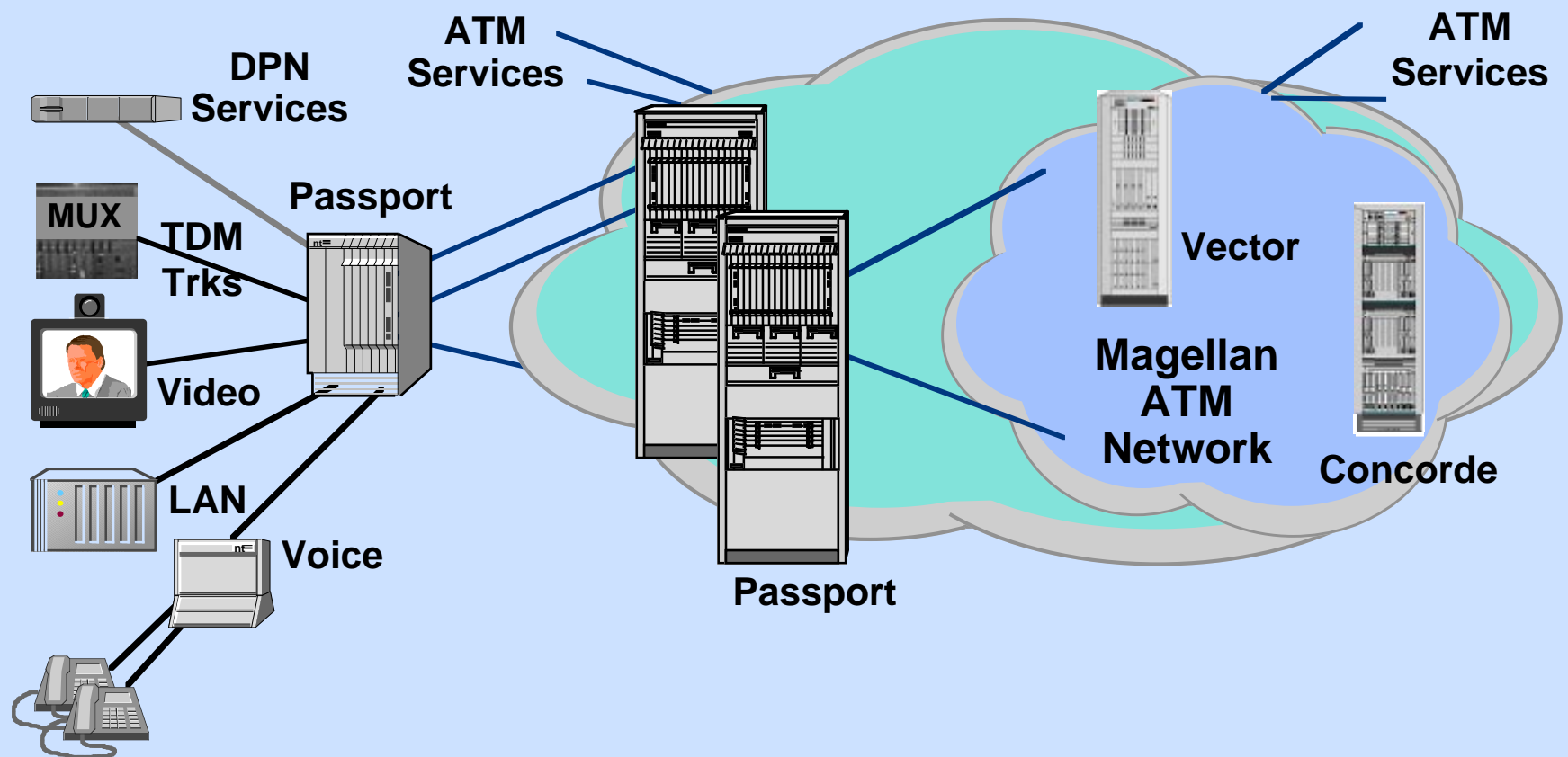
Agenda

- **Overview**
- Existing Passport ATM applications
- Evolving Passport ATM applications
- Passport ATM technology
- Passport ATM business value summary

Passport Service Provider Role

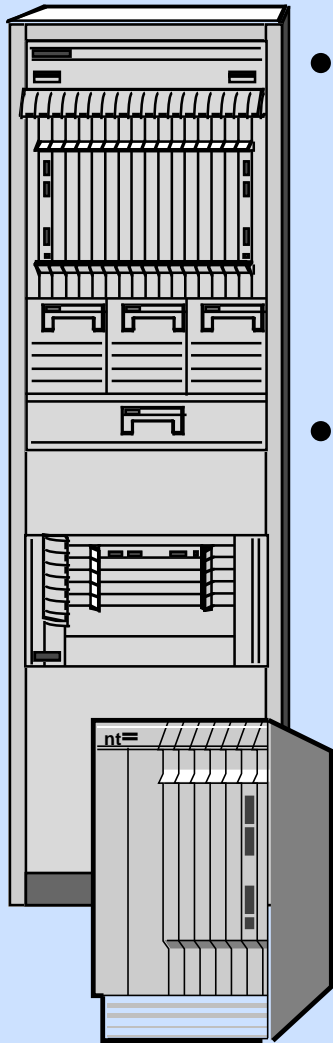


Passport Enterprise Role



- Passport bridges multimedia services to ATM
- Flexible and high performance ATM adaptation architecture

Passport ATM Capabilities

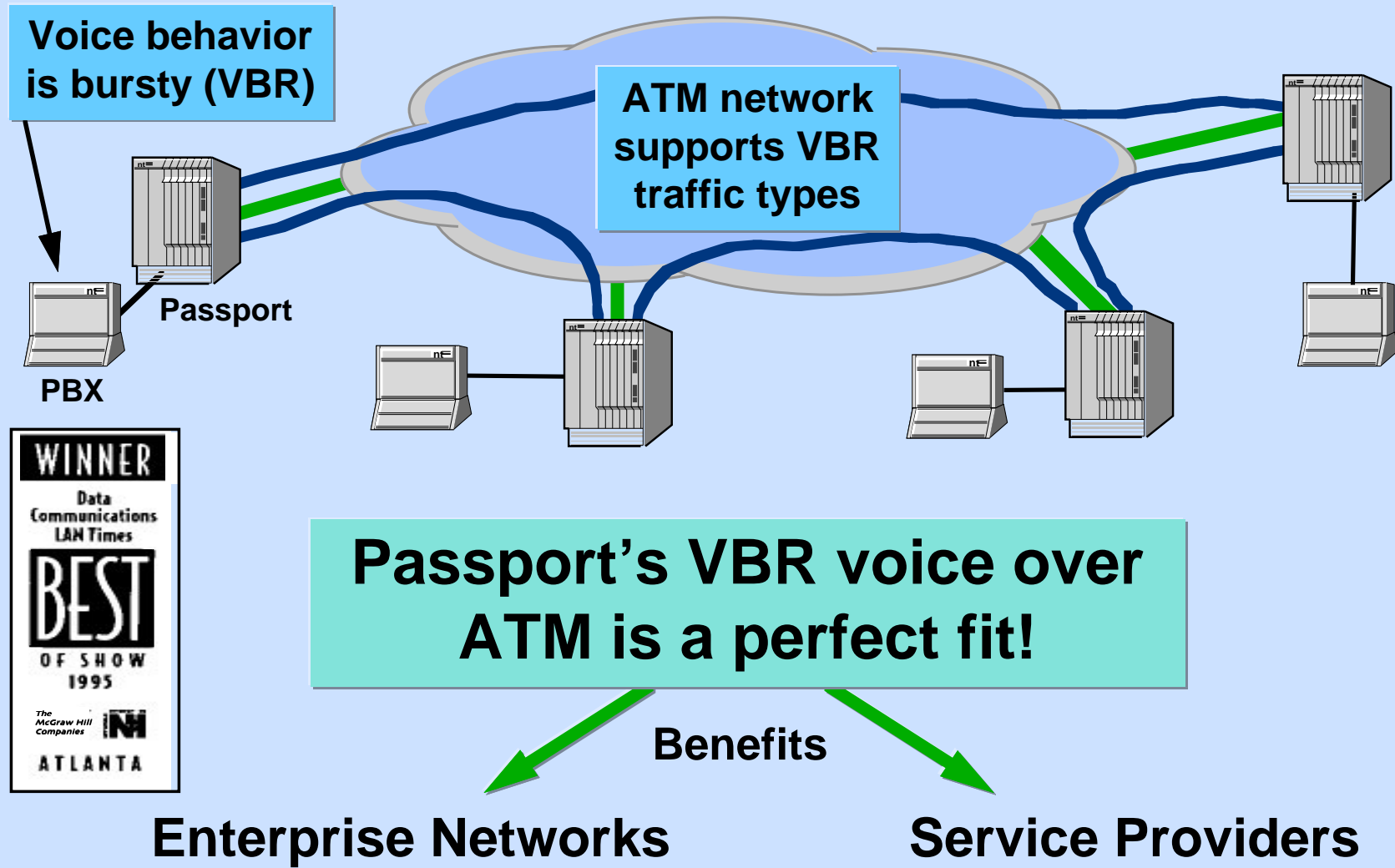


- **Breadth of ATM adaptation services**
 - AAL5: frame relay (FR-UNI, FR-NNI), HDLC transport, native LAN ethernet, TR, FDDI
 - AALx (advance of standards): voice and video services
 - AAL1: circuit emulation service **NEW!**
- **Flexible ATM cell relay services**
 - PVC VCC and VPC ATM-UNI, ATM-NNI, B-ICI
 - SVC and soft PVC ATM-UNI services **NEW!**
 - ATM inverse multiplexing **NEW!**
 - dynamic ATM networking: IISP, P-NNI **NEW!**
- **Global ATM physical interfaces**
 - OC3 SM and MM, DS3 and DS1 ATM UNI
 - STM-1, E3, E1, JT2 (6 Mbit/s) ATM UNIs

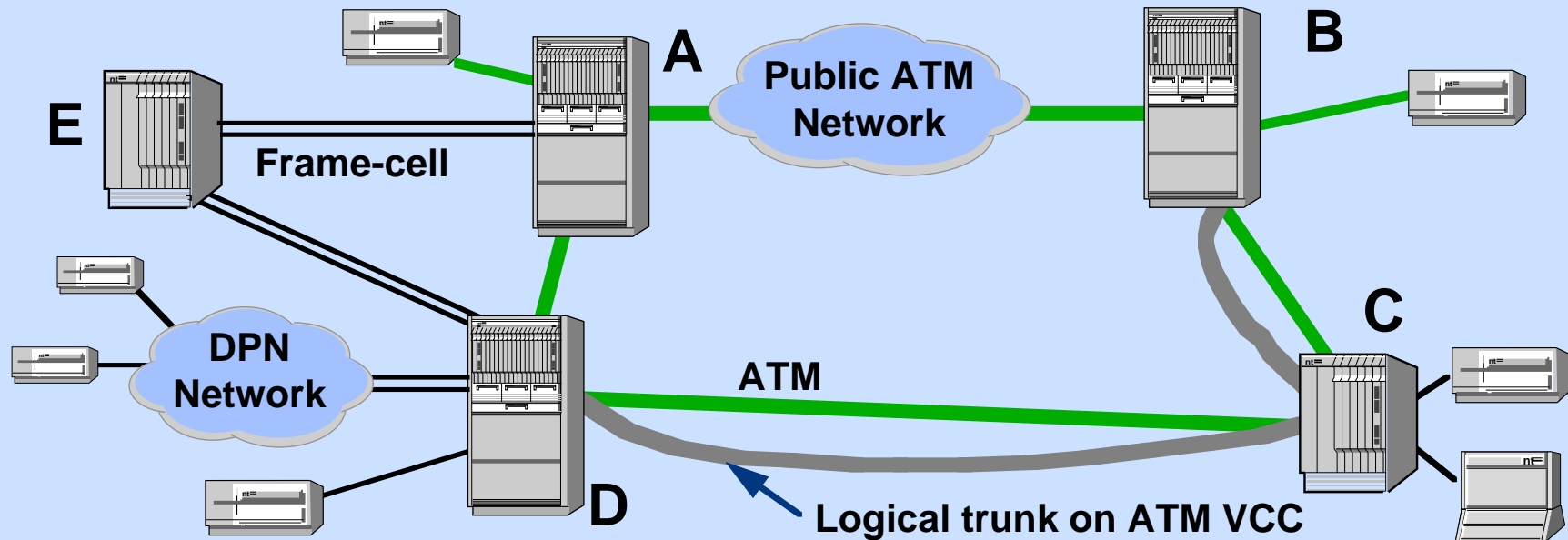
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Passport Voice Over ATM

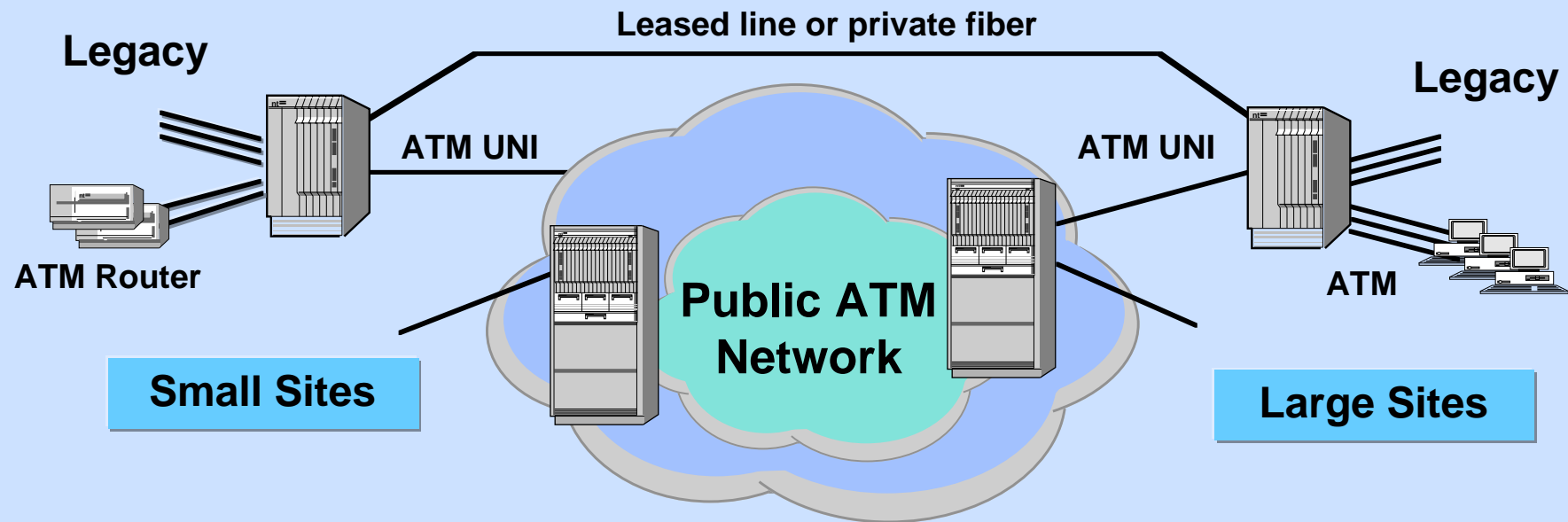


Passport Frame Traffic over ATM



- Large range of frame services supported
- Flexibility of network deployment
- Operational simplicity and reliability
- Investment protection and new opportunities


Passport ATM Services



- **ATM UNI services supported on Passport**
- **Consolidation of ATM and non-ATM access**
- **Flexible deployment options**

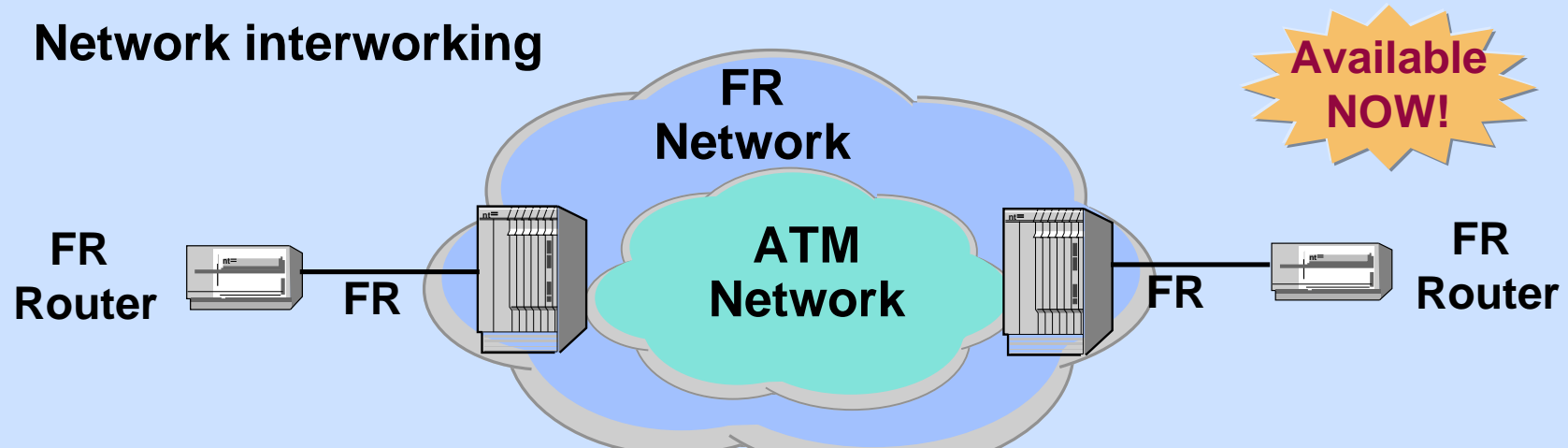
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- **Evolving Passport ATM applications** 
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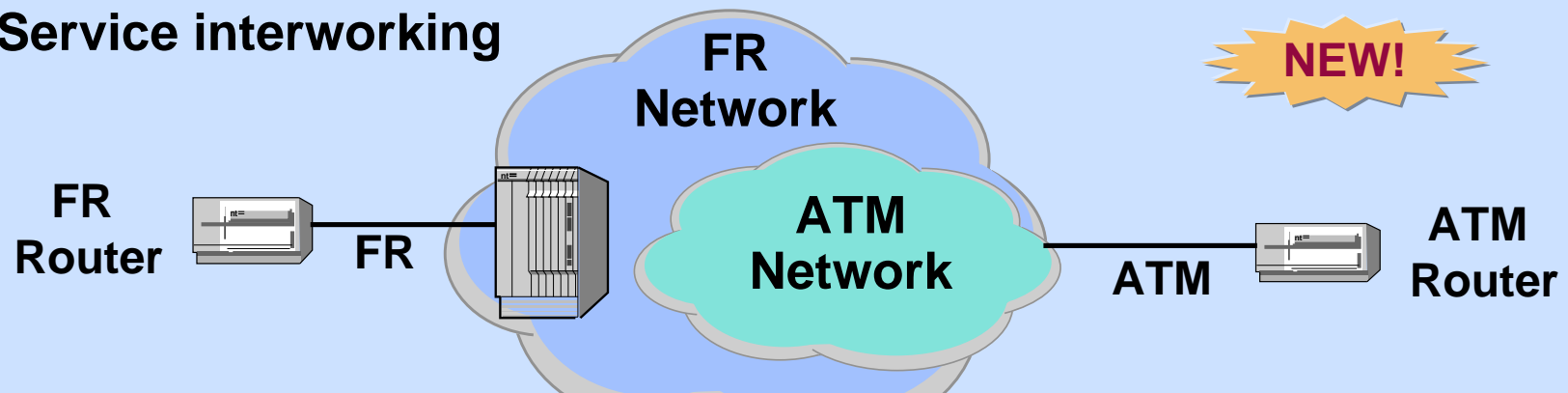
Frame Relay - ATM Interworking

Network interworking



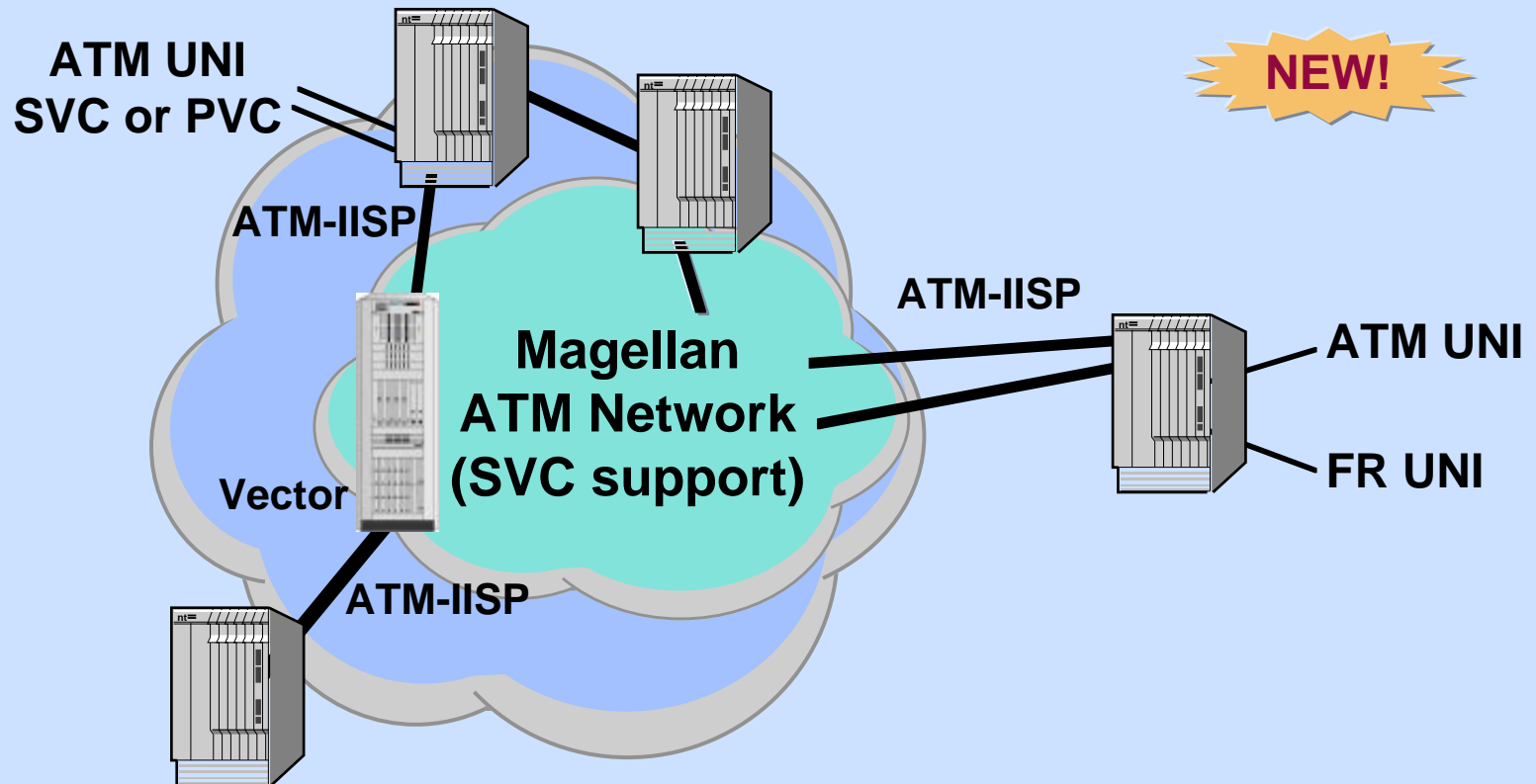
Enables carriage of frame relay traffic across the ATM network

Service interworking



Allows ATM and FR users to seamlessly interconnect

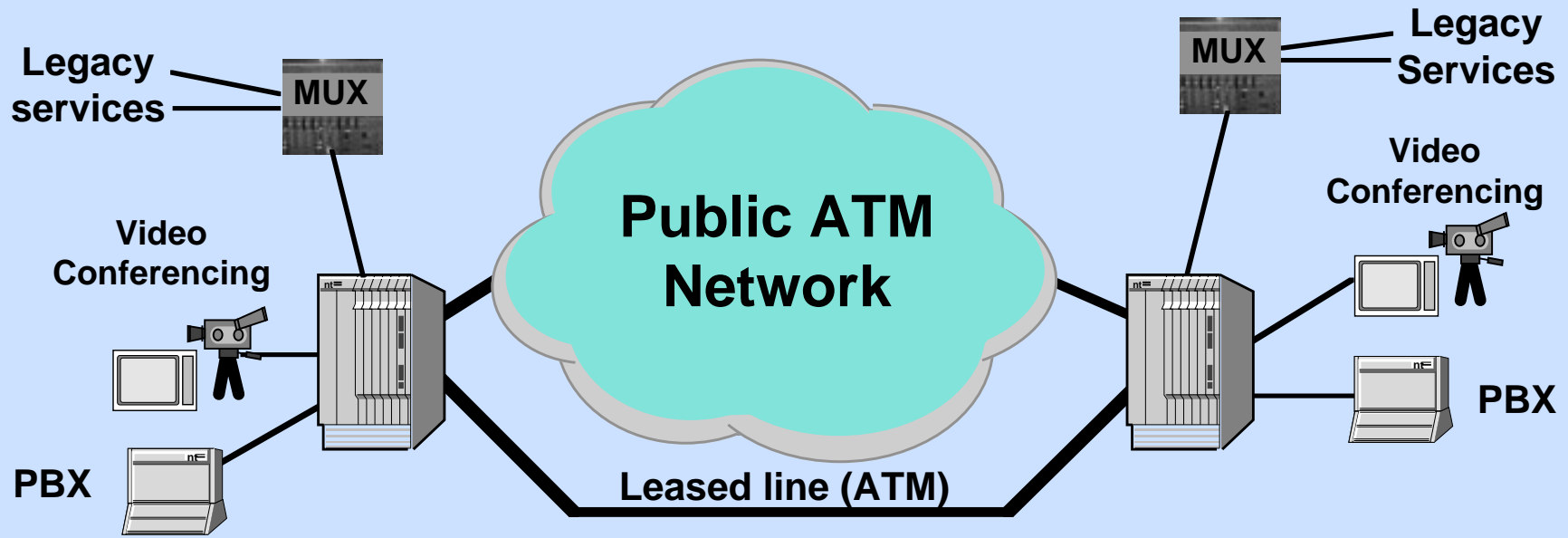
Passport ATM Dynamic Networking



- **Soft-PVC will provide simplified provisioning and re-route on failure**
- **Standards compliant ATM IISP interface for SVC support**
- **Common Magellan ATM networking with FOREThought**

Passport AAL1 Circuit Emulation for Network Consolidation

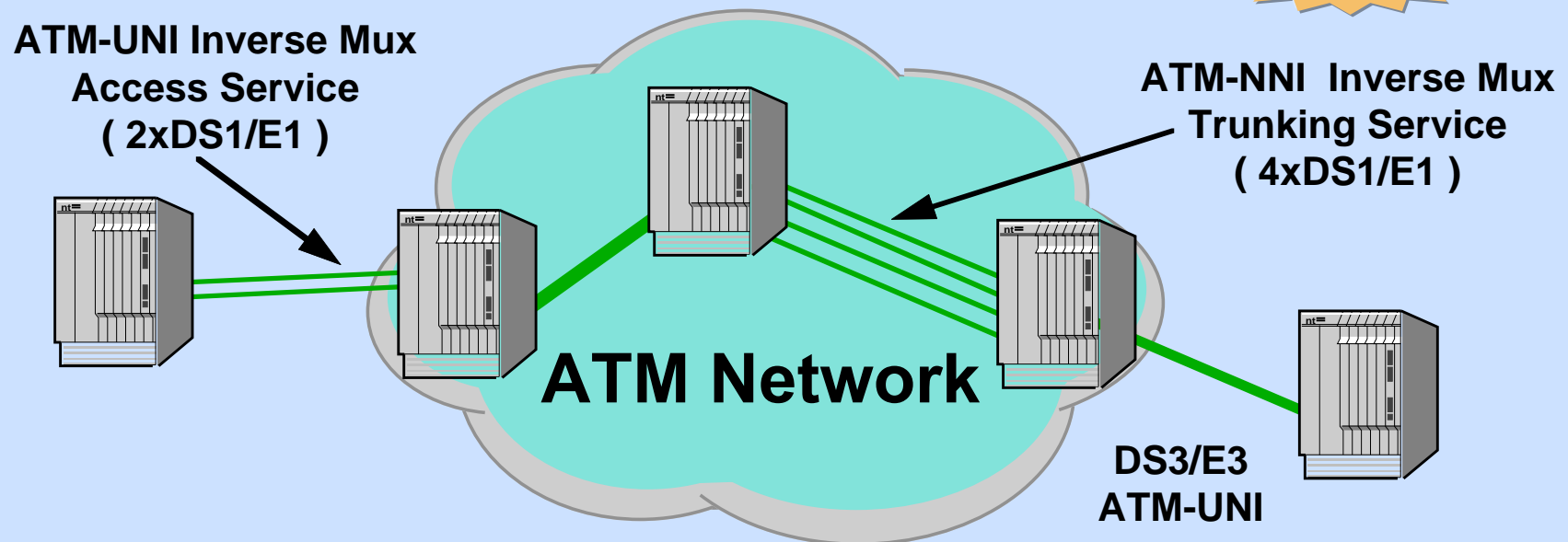
NEW!



- Enables support of hybrid TDM/ATM networks
- Reduce WAN facility costs with ATM network consolidation
- Preserve investment in existing TDM equipment
- Exploit values of ATM switching

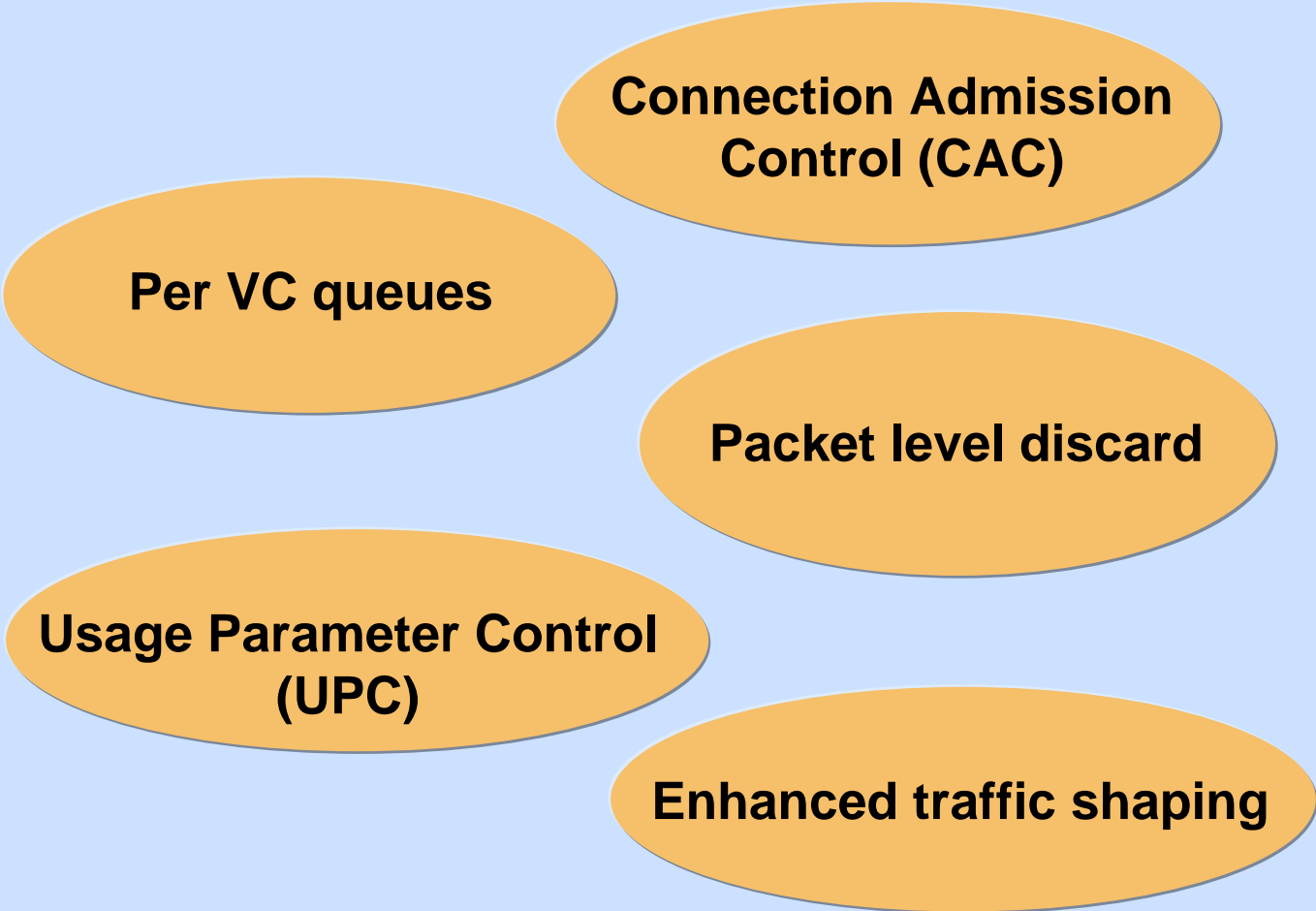
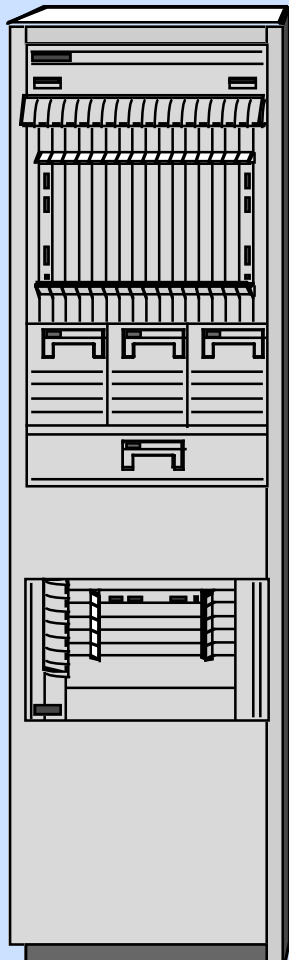
Passport ATM Inverse Multiplexing

NEW!



- Standards-compliant capability
- Avoid large tariff leap between DS1/E1 and DS3/E3 by providing incremental bandwidth capability
- Resiliency of service if single link fails

Passport Enhanced ATM Traffic Management

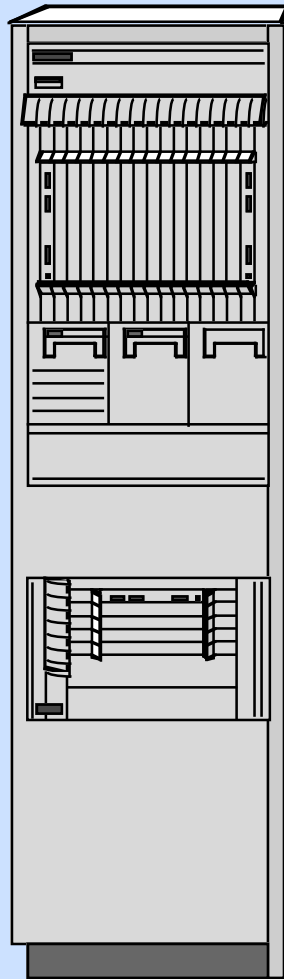


Continued evolution of ATM traffic management

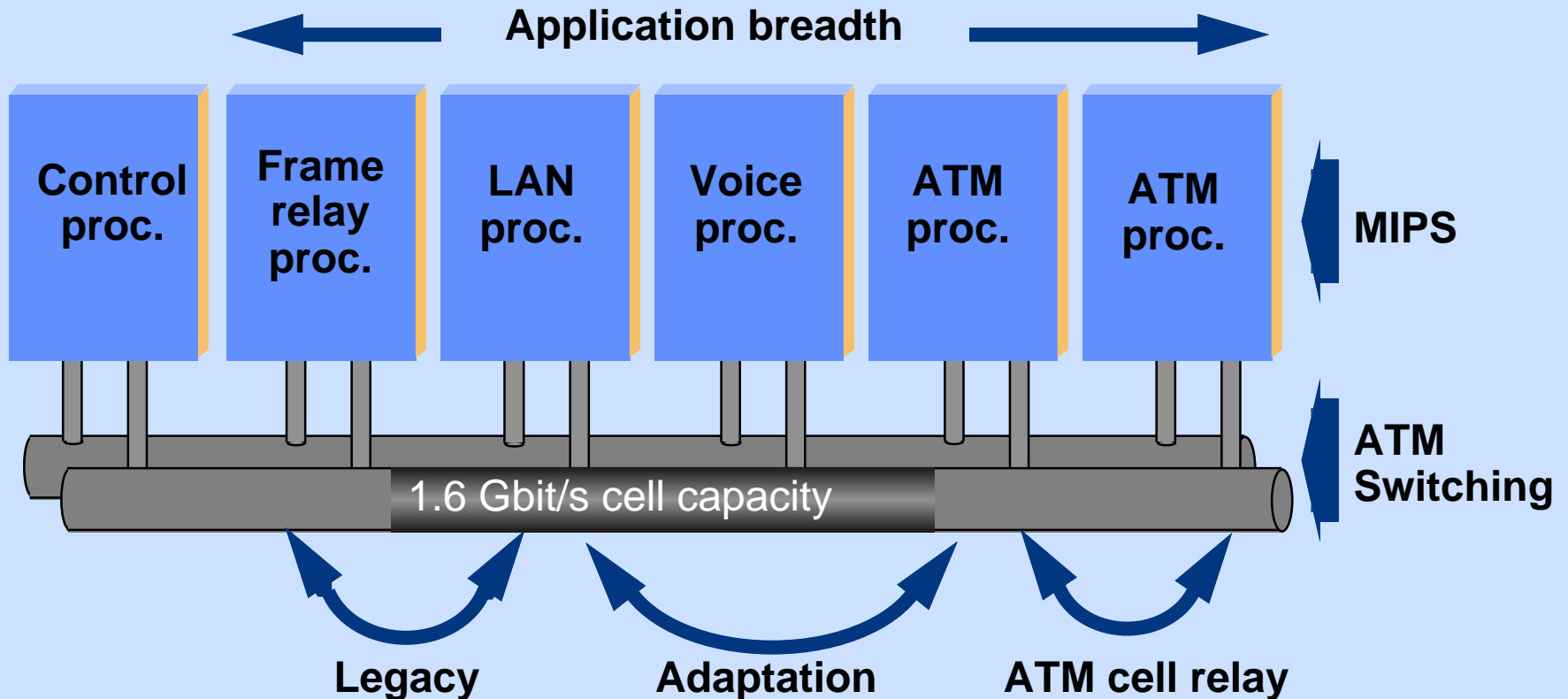
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Passport's Enabling Technology

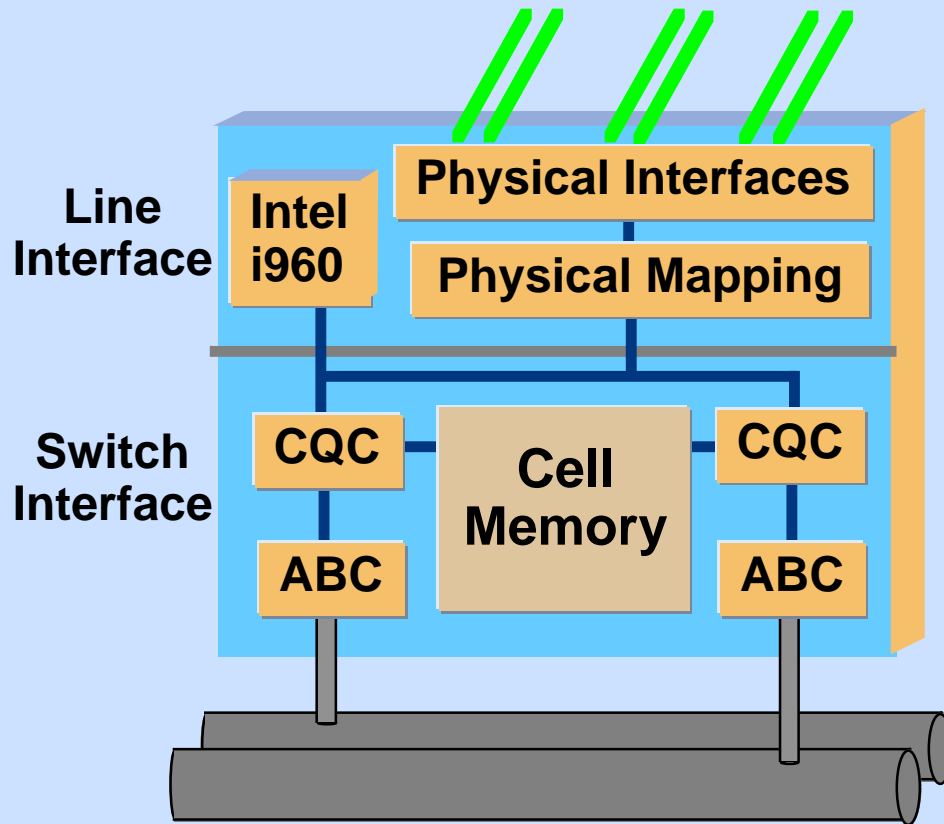


Multiprocessor ATM Architecture



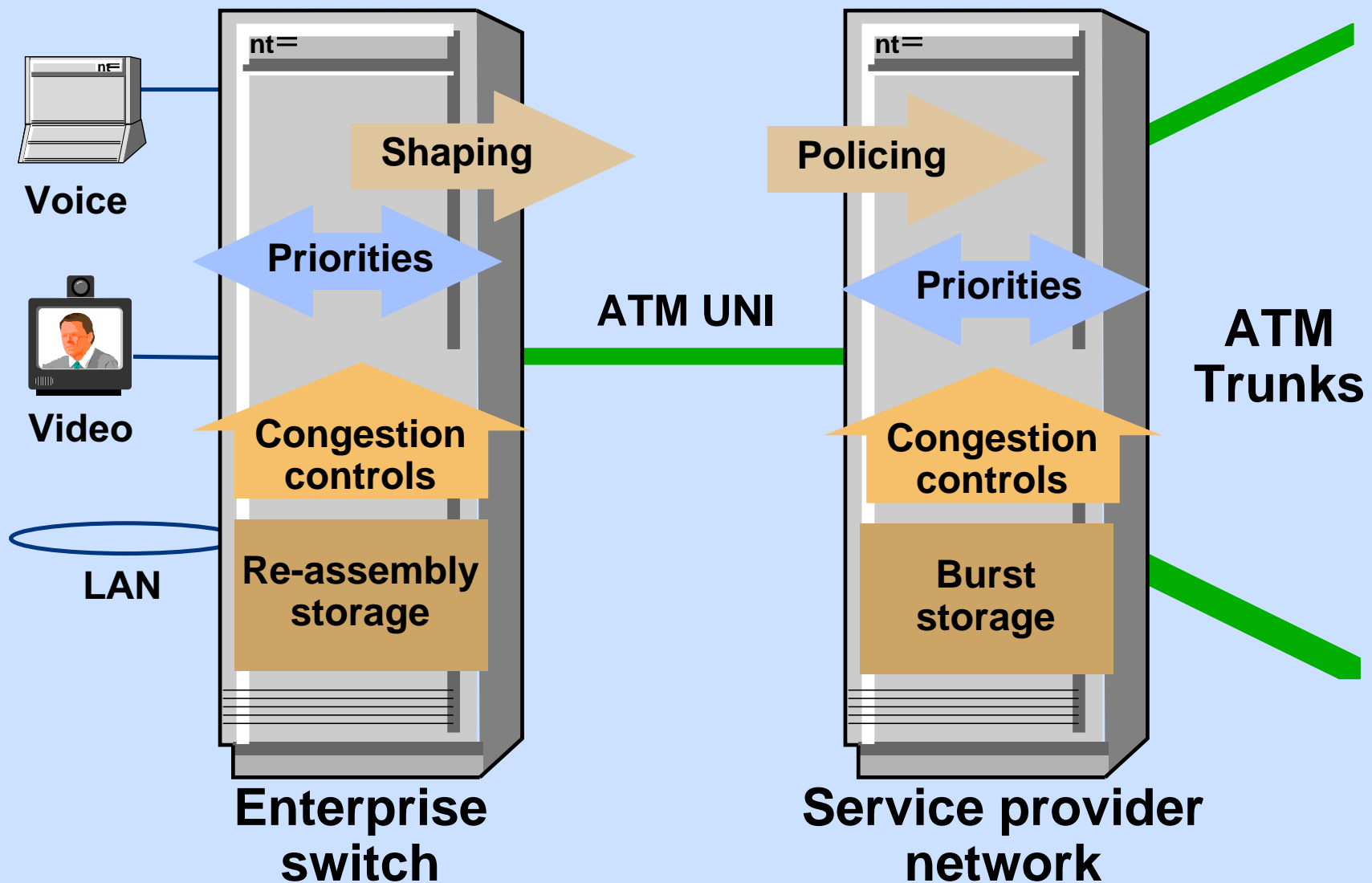
- Flexible platform for multiservice adaptation
- Passport allows flexible rollout of new services

Passport ATM FPs



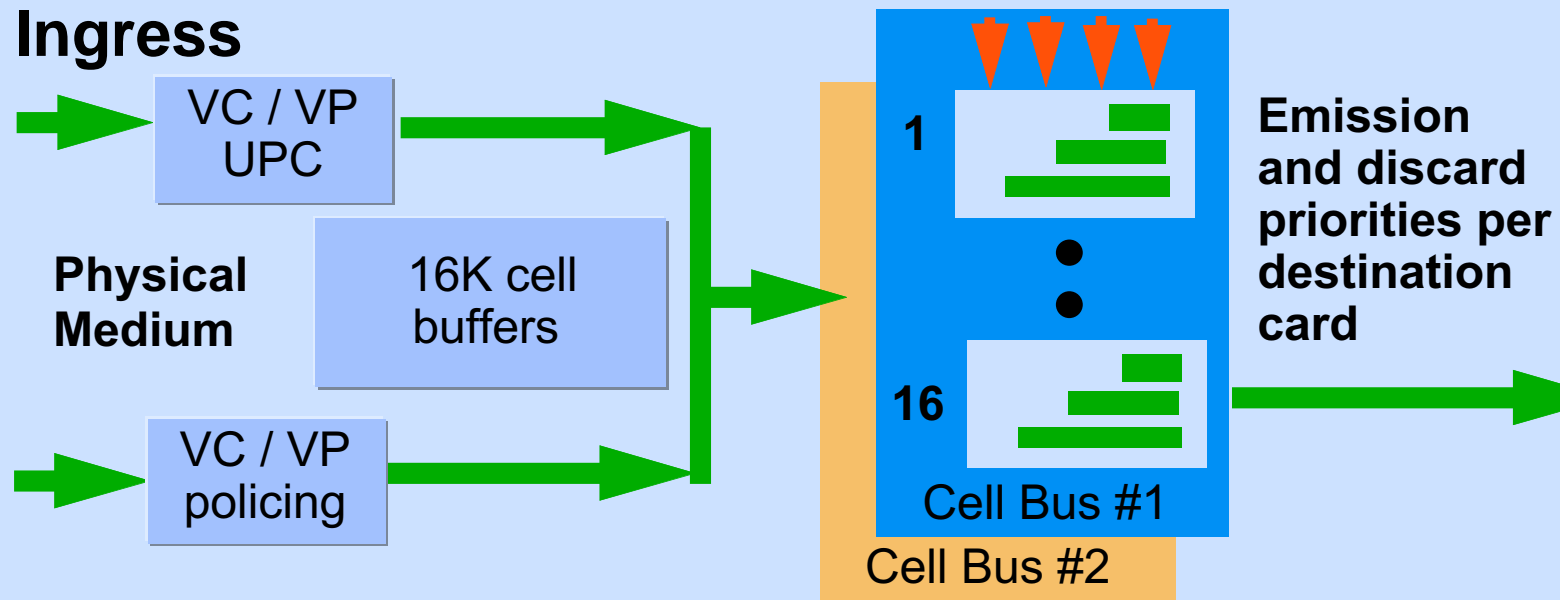
- Port fanout growth flexibility inherent in card architecture
- Modularity and partitioning enables new interfaces to be developed quickly
- High capacity ASICs support ATM switching and AAL-5 in hardware
- Processor module is evolvable to match future performance requirements

Comprehensive ATM Traffic Management is Necessary

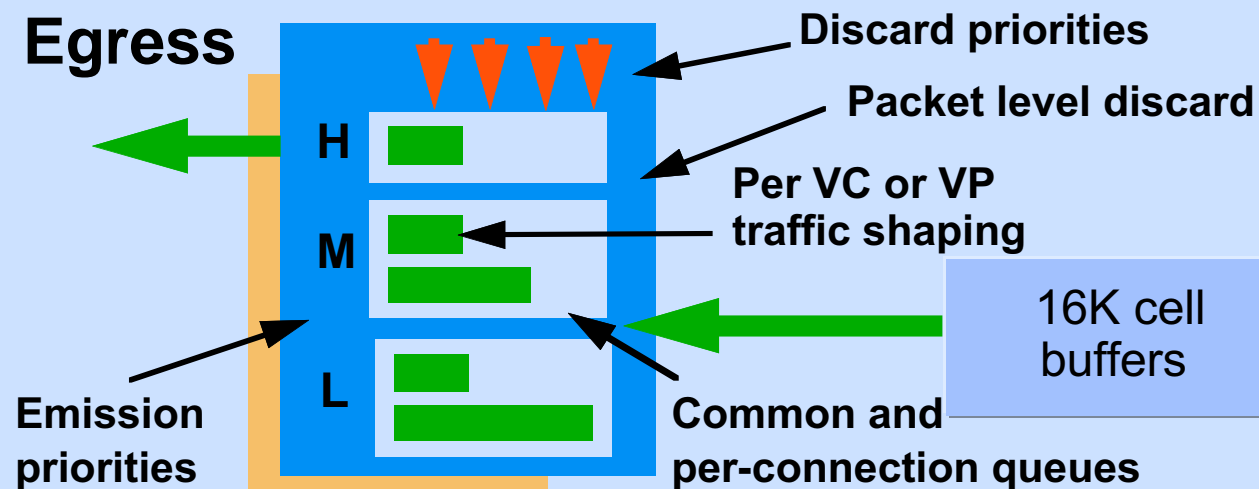


Passport ATM Traffic Controls

Ingress



Egress



Passport ATM is Standards Compliant

Demonstrated multivendor interoperability

Magellan Vector

Fore ASX-200/100

NewBridge 36150

Digital Link ATM DSU

Fore ATM OC3 NIC

GDC APEX DV-2

W&G OC3 ATM TestSet

Firebird 6000 ATM TestSet

Hitachi AN300/500

Tests with other equipment underway

Magellan Concorde

Alcatel HSS1100

Cisco 7000 AIP, 4500

HP ATM TestSet

InterPhase ATM NIC

Siemens ATM DSU

Bay LatisCell

ADTECH ATM TestSet

Standards compliance

ATM Forum agreements
(UNI 3.0, 3.1, ...)

ITU recommendations
(I.36x, I.610, I.413, ...)
(G.703/4, G.804, G.823)

ANSI
(T1-102, T1-402, ...)

Nortel is a contributor in all relevant ATM standards bodies

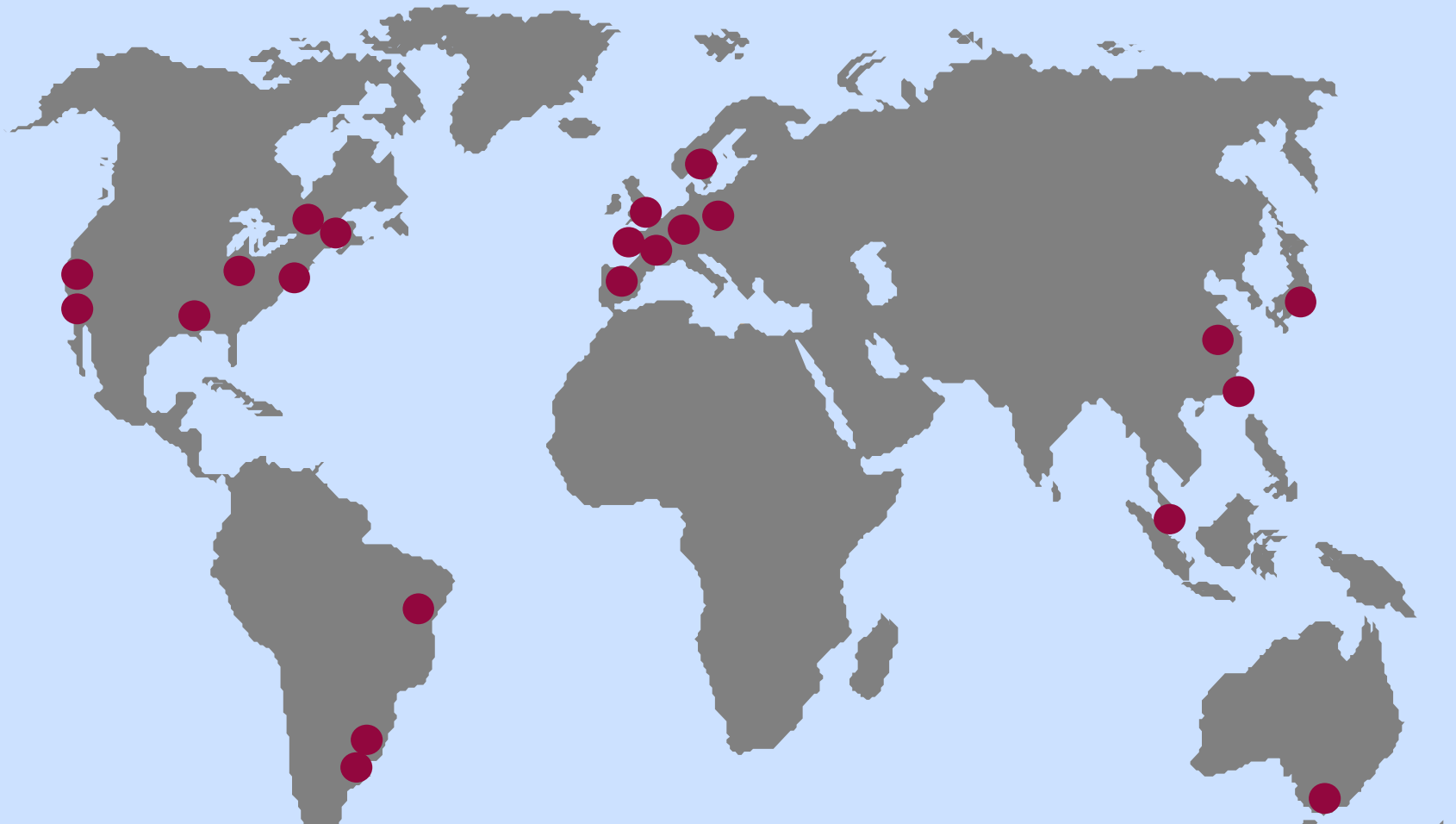
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Passport ATM Business Values

- **Comprehensive and flexible ATM adaptation**
- **Platform for both ATM enterprise networks and service provider networks**
- **Smooth and cost-effective migration path to ATM**
- **Effective and efficient bandwidth management over ATM**
- **Standards-compliant ATM solution**
- **Value-added features**

Passport ATM Deployment



Global deployment of Passport ATM

Passport ATM Experience



Passport is the right product today
and for the future