

# **DPN-100 Update: Evolving to Meet Customer Needs**

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# Agenda

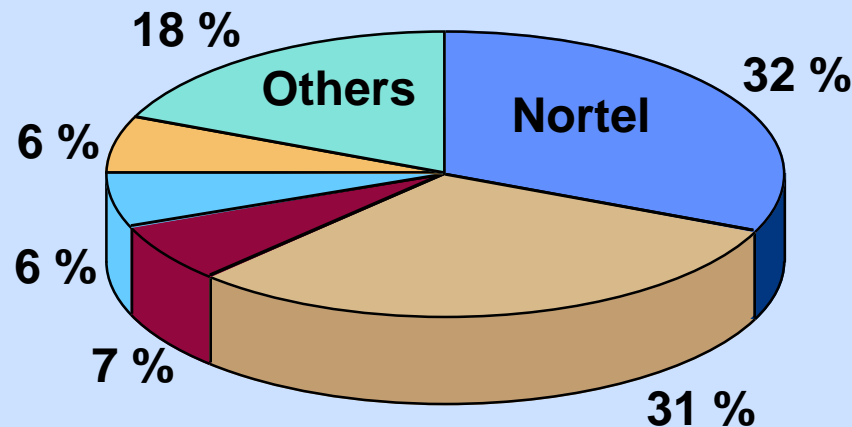
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- **Leader in Traditional WAN Networking**
- DPN-100 in the Magellan Family
- Changing Customer Needs
- Future Directions

# Leader in Traditional WAN Networking

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- Current DPN-100 or MAS deployment: 250+ customers
- DPN-100 packet networking world market share:



**DPN-100: 31,000+ MAS: 12,000+ PE386: 100,000+**

**Growing with customers by providing solutions customers need**

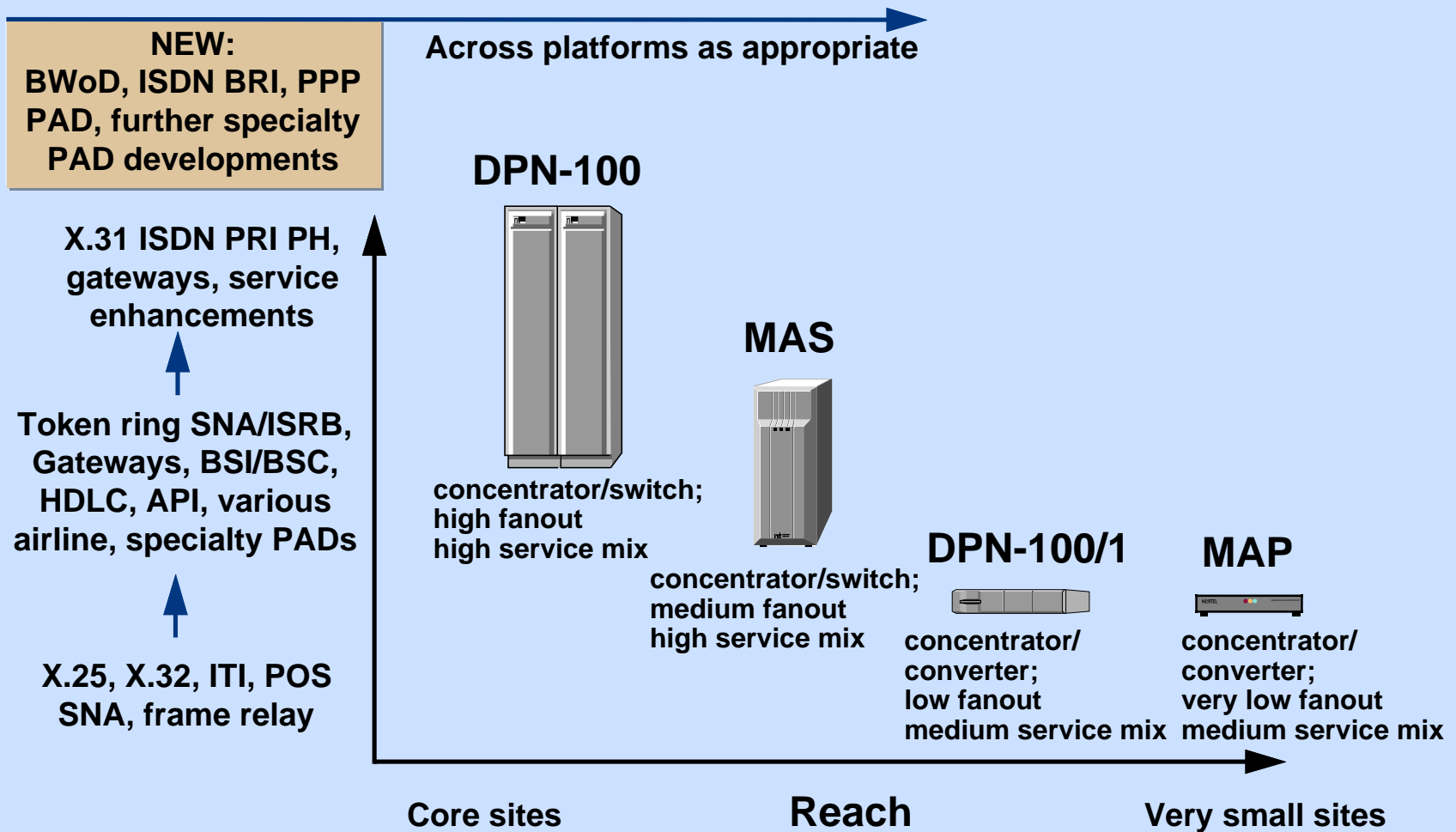
# Agenda

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- Leader in Traditional WAN Networking
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# DPN-100 in the Magellan Family

## Service mix



# Agenda

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- Leader in Traditional WAN Networking
- DPN-100 in the Magellan Family
- **Changing Customer Needs**
  - wide area networking trends
  - evolving to meet customer needs
- Future Directions

# Wide Area Networking Drivers

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- **Growing the business**
  - extending network reach economically
  - increasing the network service offerings
- **Reducing cost**
  - reducing infrastructure and operating cost
- **Increasing efficiency**
  - infrastructure and application unification  
(traditional data -> remote LAN -> multimedia)
  - overhead reduction

**Business considerations are driving networking trends**

# **Evolving to Meet Customer Needs**

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- **Expanding service and extending reach**
  - remote LAN access and internet traffic support
  - Magellan Access Pad (MAP)
  - frame relay access across all platforms
- **Evolving to reduce customers' costs**
  - bandwidth on demand
  - ISDN PI with BWoD and dial-backup network links
  - network links over frame relay
- **Related Product Evolution**
  - MAS HPPE/EPRPI
  - MI-8 integrated modem PI
  - DPN-100 and MAS solid-state storage evolution



# Expanding Service and Extending Reach

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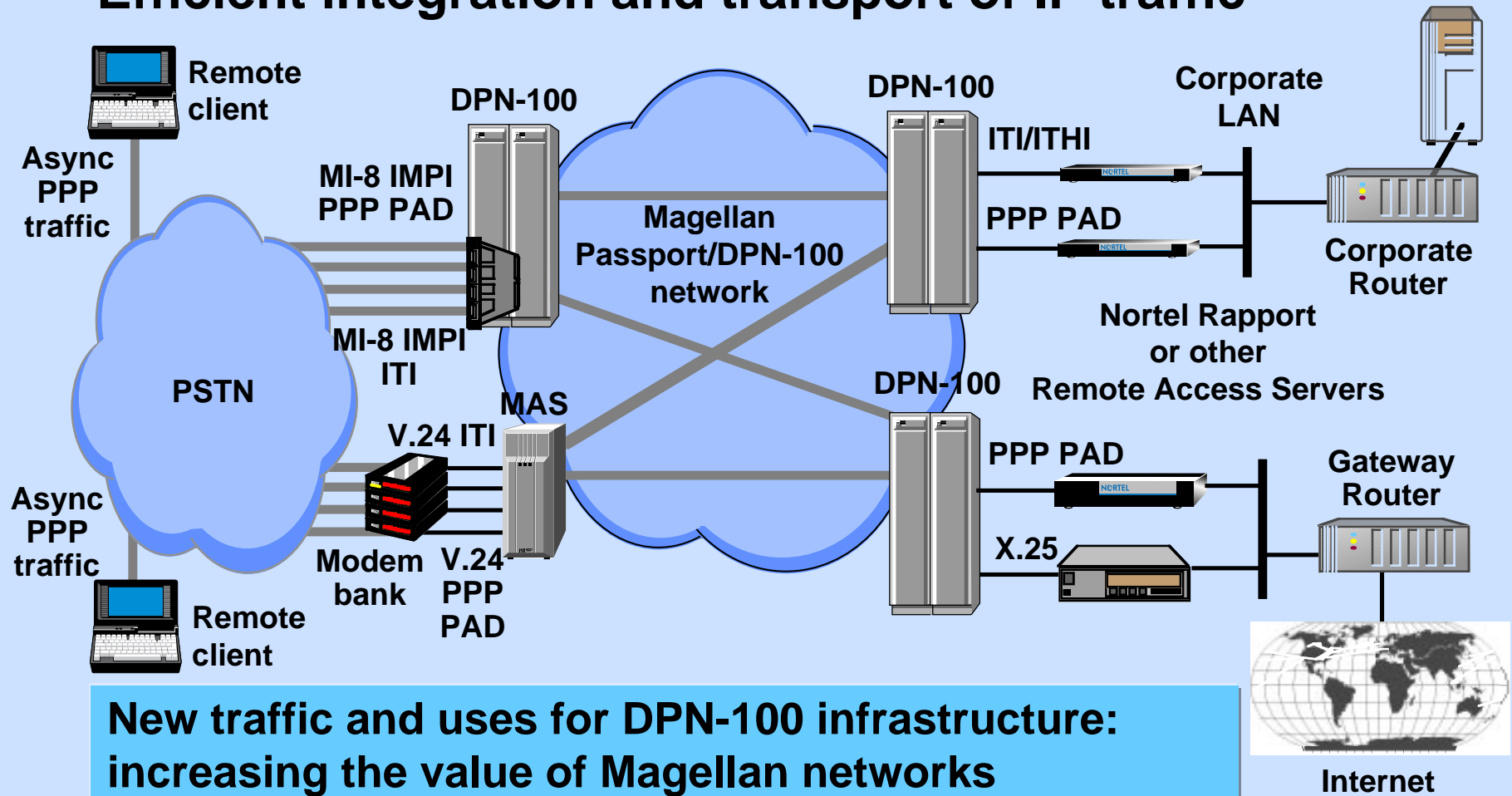
## Remote LAN access and the Internet

- **Remote LAN and Internet access reality**
  - work at home, small office, and travelling employees connecting to corporate LAN
  - huge growth in corporate and public Internet access
- **Technology in place**
  - notebook PCs, inexpensive modems, remote LAN servers
  - IP traffic transport over WAN using standardized PPP protocol
- **Service providers and enterprises need to reduce cost of client connectivity**

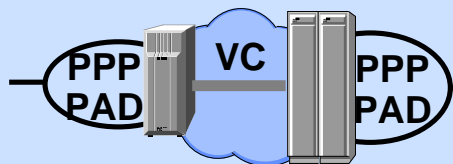
**DPN-100 and MAS expanding to provide remote LAN and Internet traffic transport**

# Remote LAN and Internet Traffic Support

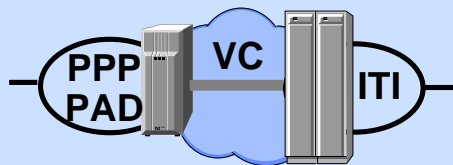
## Efficient integration and transport of IP traffic



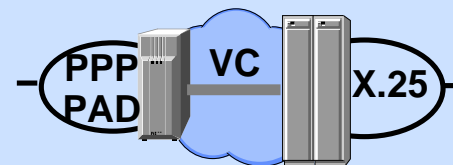
# Remote LAN and Internet Traffic Support



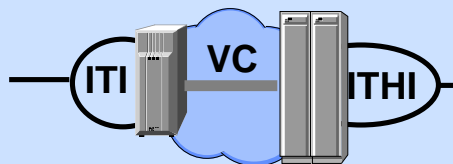
- **New async PPP PAD packetizes incoming PPP traffic**



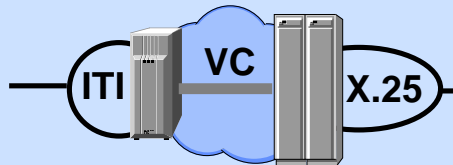
- **Supported on DPN-100 and MAS**
  - software-based PAD
  - MI-8 IMPI and V.24 PIs



- **Interworks with existing X.25 and ITI/ITHI services**



- **Greater efficiency, lower delay and higher throughput**

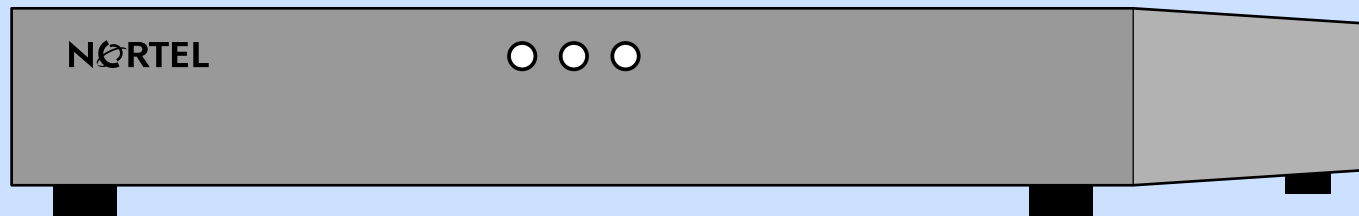


**Flexibility, ease of implementation for interworking with existing network**

# Expanding Service and Extending Reach

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## Magellan Access PAD (MAP)

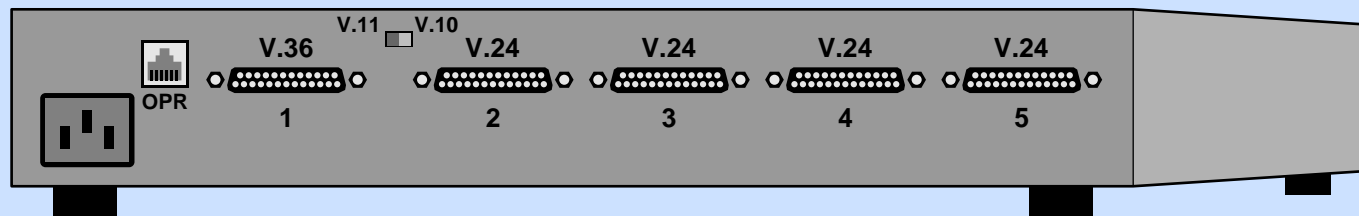


- A new Magellan access device extending reach economically into smaller sites
- Provides traffic concentration, protocol conversion and switched network access
- Integrated into Magellan NMS, software and configuration downloadable, and centrally manageable

# Expanding Service and Extending Reach

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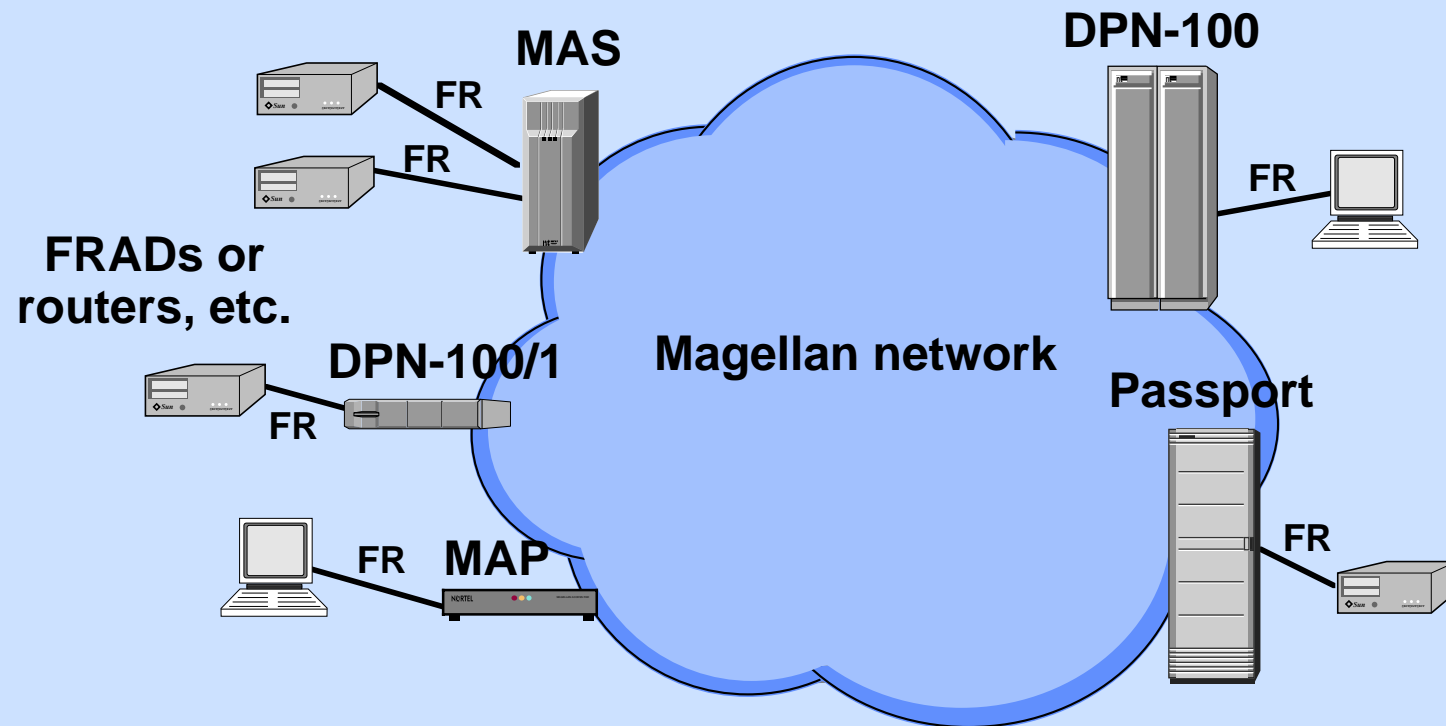
## MAP details



- One high-speed DTE/DCE V.36/X.21/V.35 interworking port supporting network connectivity
- Four V.24 DTE/DCE ports supporting access services and network connectivity

# Expanding Service and Extending Reach

## Frame relay access service added to DPN-100/1 and MAP



**Extending frame relay service across all platforms**

# **Evolving to Reduce Costs**

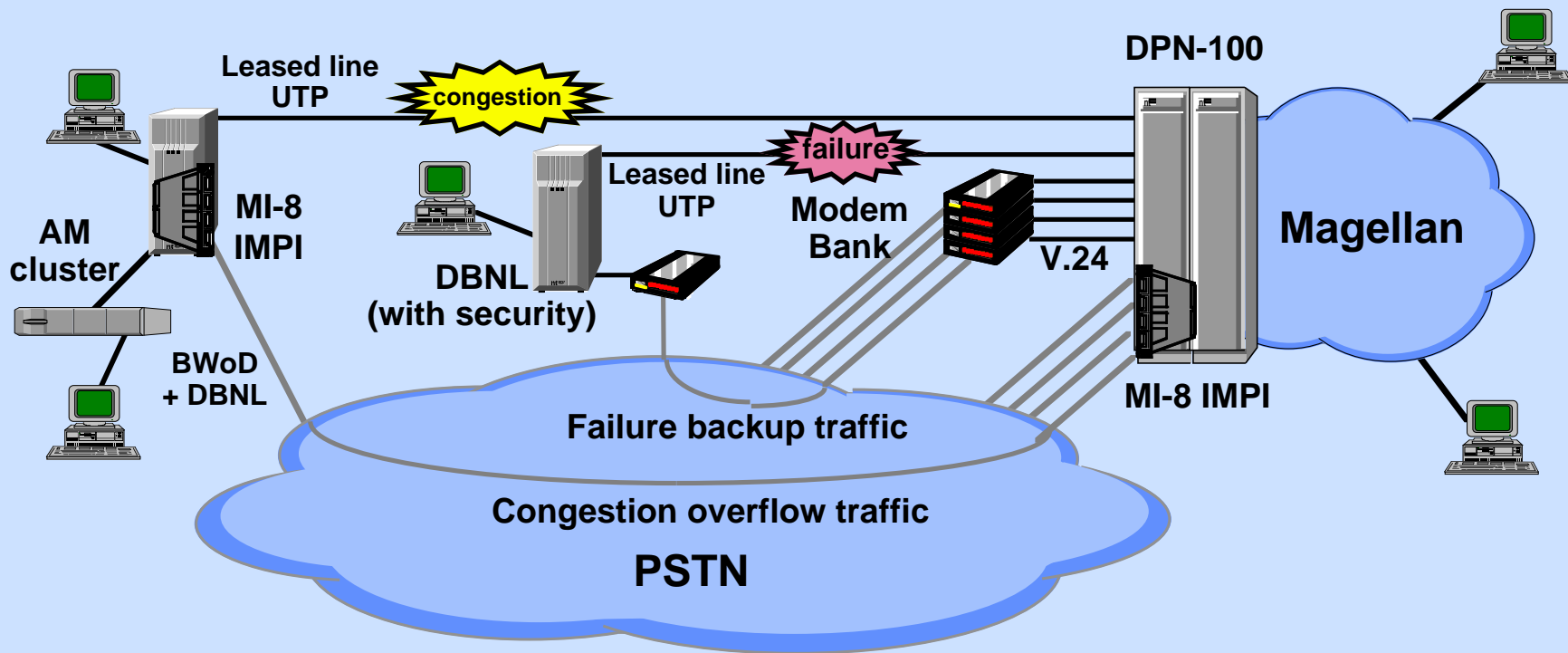
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**Reducing infrastructure and operating costs through:**

- **Bandwidth on demand (BWoD)**
- **ISDN PI with BWoD and dial-backup netlinks**
- **Network links over frame relay**

# Evolving to Reduce Costs

## Bandwidth-on-demand



**Expanding reach and increasing traffic adaptability reliably while reducing infrastructure costs**



# **Evolving to Reduce Costs**

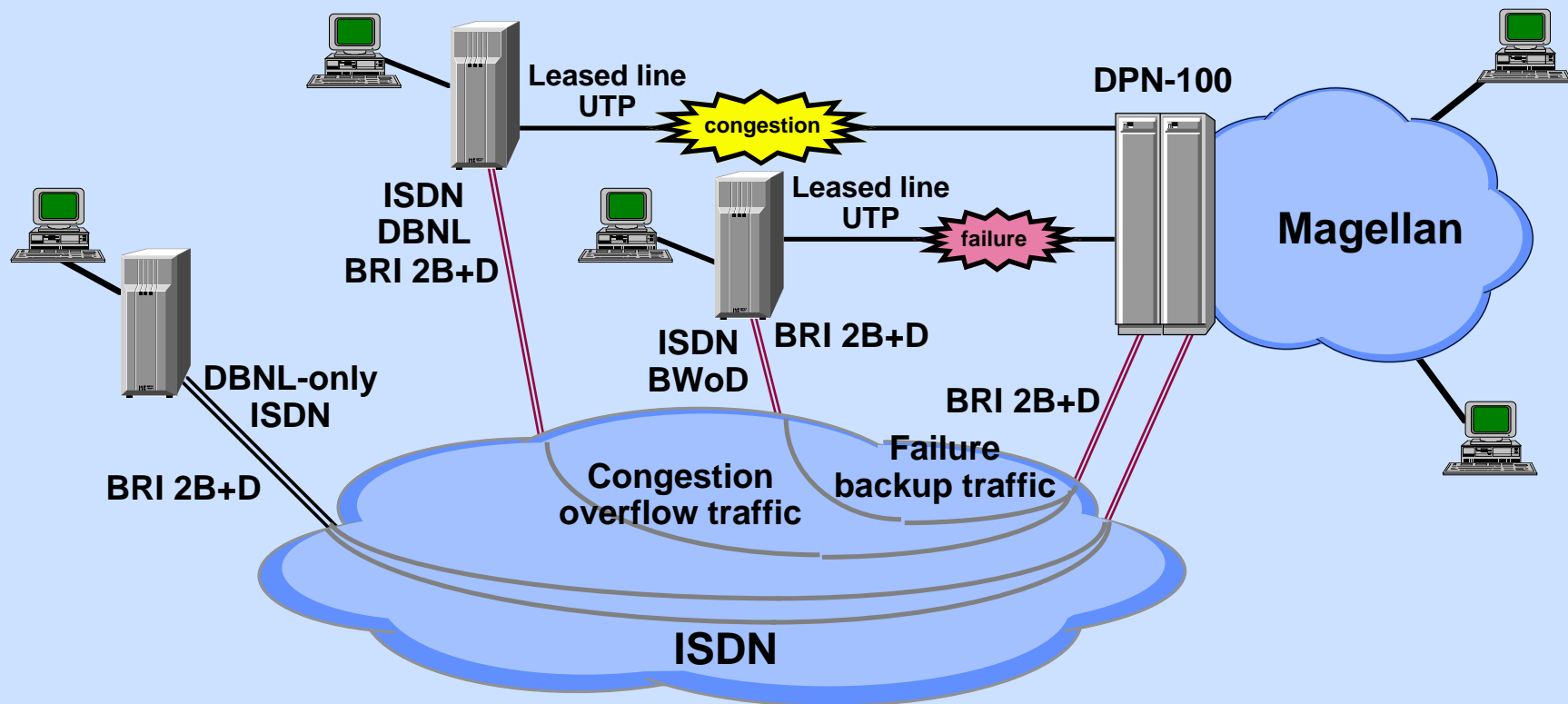
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## **Bandwidth on demand and DBNL:**

- Configurable on V.24, MI-8 IMPI and other interfaces**
- Can configure only DBNL or BWoD+DBNL, each with optional security feature**
- Integrated, fully automatic, and fully configurable for thresholds and duration**
- Link modules with one leased line and guarantee availability**
- Engineer to average traffic, not peak, and save on reduced leased line size cost**

# Evolving to Reduce Costs

## ISDN PI with BWoD and Dial-backup Netlinks



All the benefits of BWoD and DBNL at ISDN speeds

# Evolving to Reduce Costs



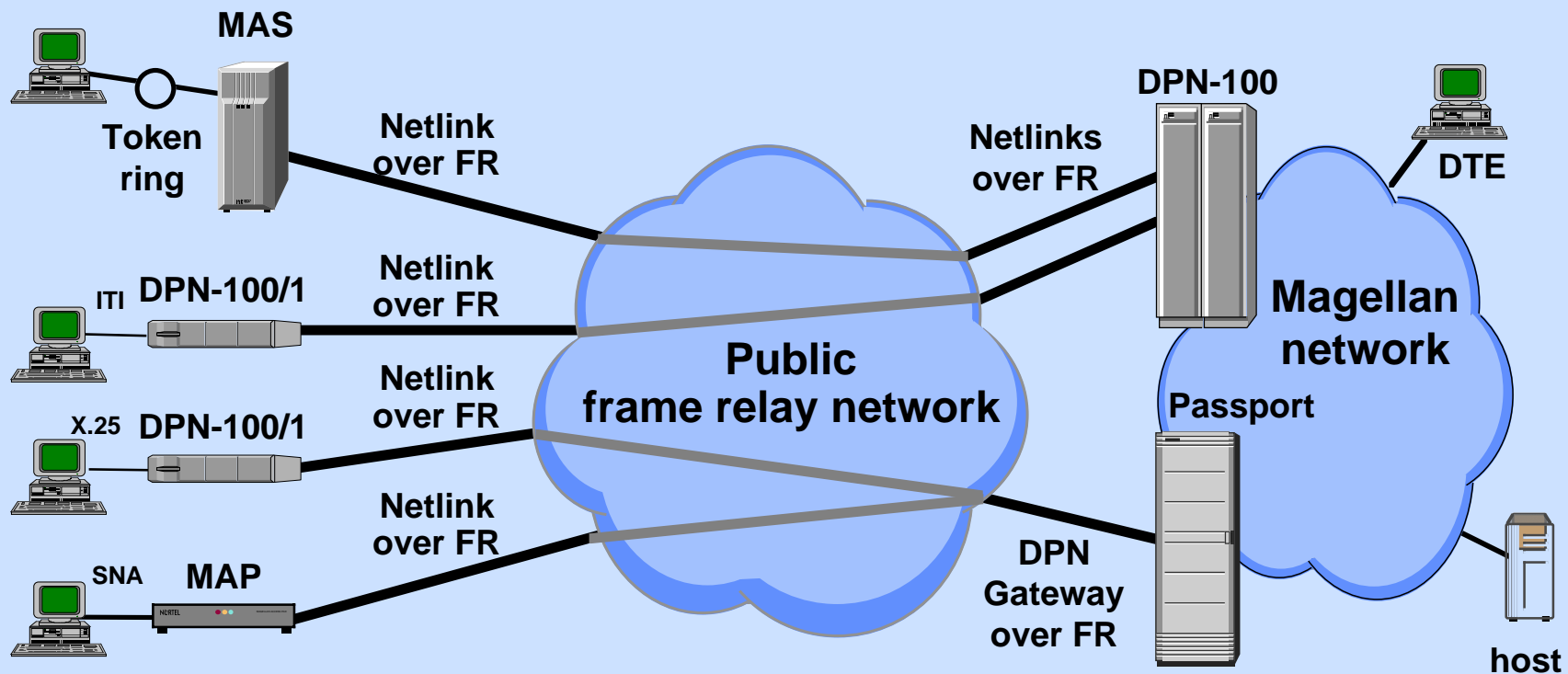
## ISDN PI details

- Supported in DPN-100 or MAS
- One ISDN BRI (2B+D) Euro-ISDN S/T interface
- BRI supports up to two 64 kbit/s DBNL, BWoD, or dial-in UTP network links
- One G.703 or V.36/X.21/V.35i dedicated UTP network link at up to 256 kbit/s
- Integrated platform providing primary netlink and BWoD netlink concurrently in a single PI
- Configured and managed via Magellan NMS

**Fully-integrated ISDN platform for DPN-100 and MAS**

# Evolving to Reduce Costs

## Network links over frame relay across all platforms



**Extends Magellan access, maintains full network integration, economically via public frame relay facilities**

# Related Product Evolution

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- **MAS HPPE/EPRPI**
- **MI-8 integrated modem PI**
- **DPN-100 and MAS storage evolution**
  - alternatives to existing disk-based storage

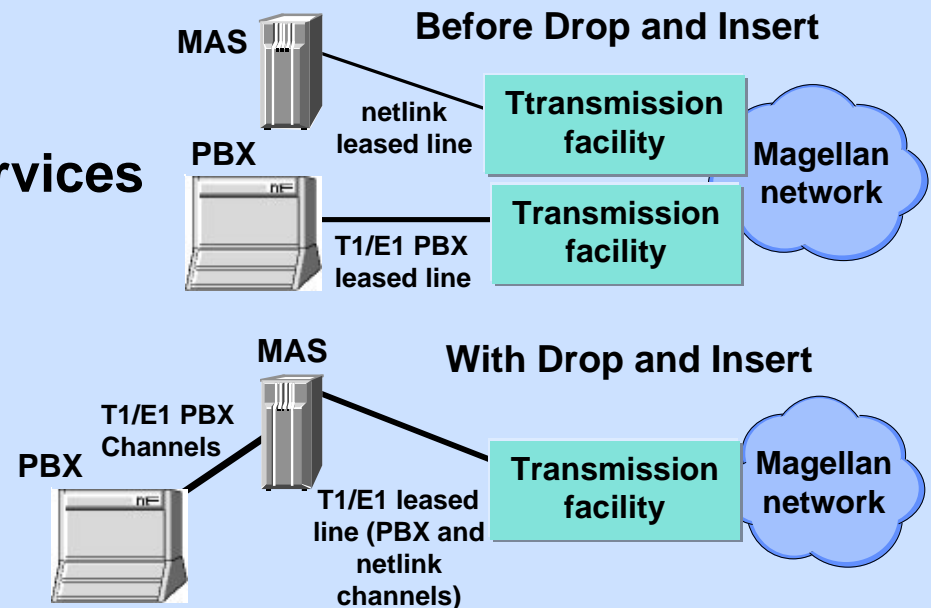
# MAS HPPE/EPRPI

- **HPPE on MAS**

- increased module performance: up to double
- higher speed connectivity, more high-speed ports
- new MAS HPPE card generally available now

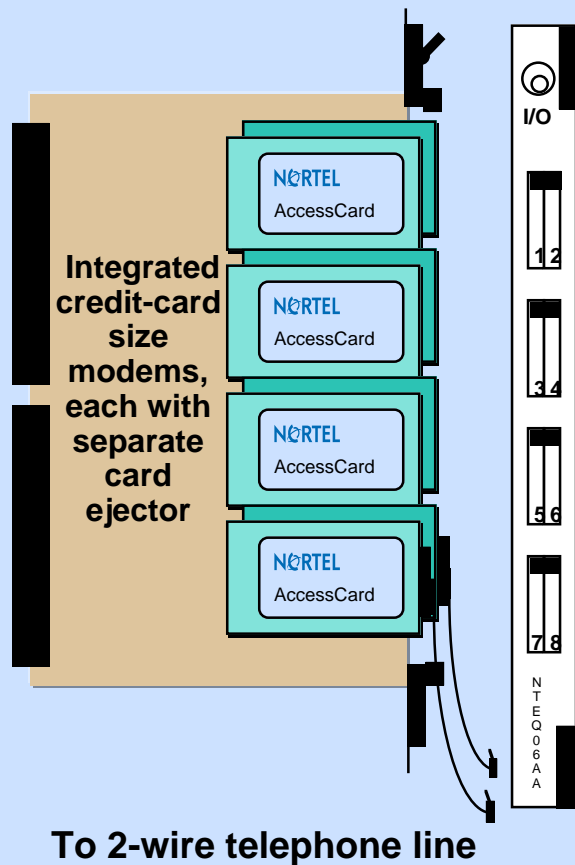
- **EPRPI on MAS**

- T1/E1 connectivity
- two DMA ports free for services
- drop and insert capability saves facility costs
- HPPE and PE386 support
- generally available now



**HPPE and EPRPI on MAS for high performance and high speed**

# MI-8 Integrated Modem PI



- Up to eight individual modems
- V.34 28.8 kbit/s async dial;  
19.2 kbit/s sync dial
- ITI, POS, X.25, DBNL, BWoD NL
- Magellan NMS configurable,  
downloadable and manageable
- Available now

**High-density modem pool and central management system providing significant cost and footprint savings**

# DPN-100 and MAS Storage Evolution

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- **Solid-state flash memory-based alternative to disk drive-based storage products**
- **Maintains existing external form factor**
  - AM/RM flash storage pack for DPN-100
  - flash SCSI/bus extender card for MAS
- **One-for-one field replacement**
- **Fully compatible with existing modules and NMS**

**Improves reliability and extends service life, while lowering maintenance and life-cycle costs**



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# Future Directions

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- **Further service and product expansion**
  - new ISDN-connectivity low fanout platform
  - further remote LAN, Internet traffic interworking
- **Evolving further cost-effective solutions**
  - UTP module connectivity over an X.25 VC
  - ISDN PI (other markets, services)
- **Ongoing related product evolution**
  - DPN-100/MAS HPPE service and PI rollout
  - future MI-8 IMPI services and technologies
  - DPN-100 and MAS solid-state storage evolution

**Inviting customers to provide input into new or specific product evolution thrusts**

# Related Sessions

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- **Magellan Access Solutions**  
Adrian Hatcher
- **Multimedia Branch Access Solutions**  
Richard Mayer
- **Engineering Network Access Solutions**  
Recep Halici and Ibrahim Gedeon
- **Passport/DPN-100 Networking**  
Elizabeth Hache
- **Magellan Network Management Overview**  
Dennis Cote