

**WORLD
TELECOM LABS**



Introducing SolP Gateway

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About World Telecom Labs

- Pioneer in VoIP for carriers (since 1997)
- Extensive installed base in Europe, Africa & Middle East
- Series of Industry Firsts & Patents
- Specialists in carrier solutions incl. satellite, Pre-Paid, SS7
- Loyal following in European competitive carrier market
- Long term Audiocodes partner



Reference Customers

- ABCom (leading ISP in Albania)
- Cable & Wireless
- COLT Netherlands
- Maroc Telecom
- Mobilkom Group
- Vizada (ex-Telenor Satellite)
- Vodafone Italia

SoIP - Signalling over IP

What is it?

- Simple SS7 to IP gateway
- Signalling AND Media gateway
- Sun Solaris server with Audiocodes E1 gateway inside
- Proven product based on well tested WTL elements (SS7, H323 & SIP software)
- A baby IPNx (WTL's Class 4 switch)

What it is not

- A basic E1 gateway (like Quintum/Cisco)

SoIP- Connecting the VoIP and PSTN world

- Compact, High Performance, Cost Effective SS7 to IP Gateway
- 1 to 16 Signalling Link Pairs
- 2 to 32 E1/T1 trunks
- SIP AND H323 on same SoIP
- 30 to 960 VoIP calls
- Managed by SW Config (web-based application)
- Uses OSST™ from WTL (Optimised SS7 Transport) format
- Sigtran transparency possible

SoIP Typical Applications

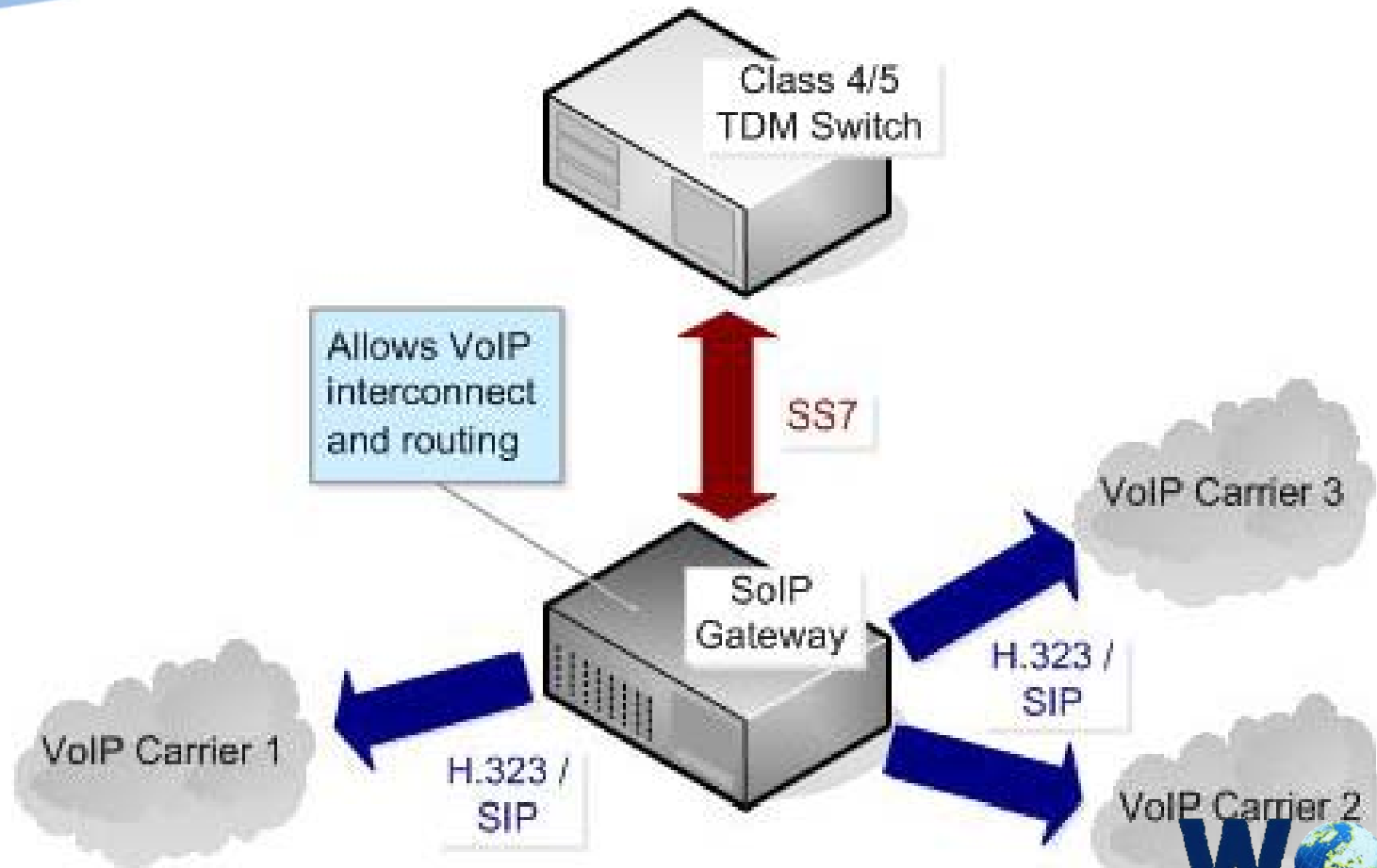
- Link legacy networks to VoIP carriers
- Extend life of existing Class 4/5 switches
- Link SIP application server to TDM network
- Many local variants supported
- Long list of successful interconnects:

• BTUK	• NTC Pakistan
• Belgacom Belgium	• TeleDenmark Denmark
• Cable & Wireless UK	• Telefonica Spain
• KPN Holland	• Telenor Norway
• Nitel Nigeria	• PTT Austria
• France Telecom Spirou	• Plus 100+ 'informal' interconnects

SoIP Target Market

- ISP transitioning to ITSP
- Pure play VoIP operator needing some TDM
- 'Big switch' owner needing IP access
- Existing operator hitting new countries

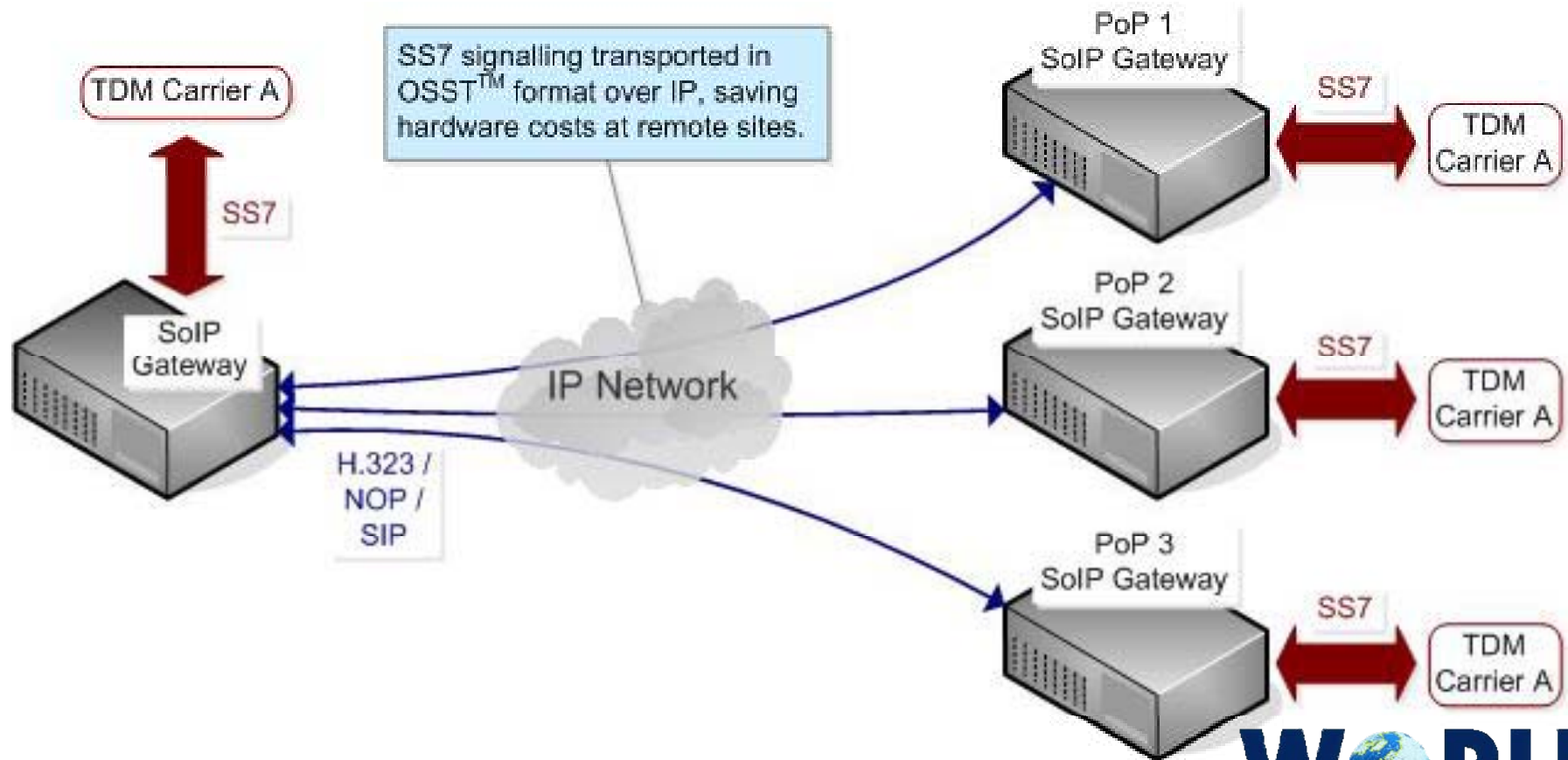
Legacy Switch To VoIP Carriers



SoIP Typical Applications

- Link legacy networks to VoIP carriers
- Extend life of existing Class 4/5 switches
- **Central signalling with distributed trunks**

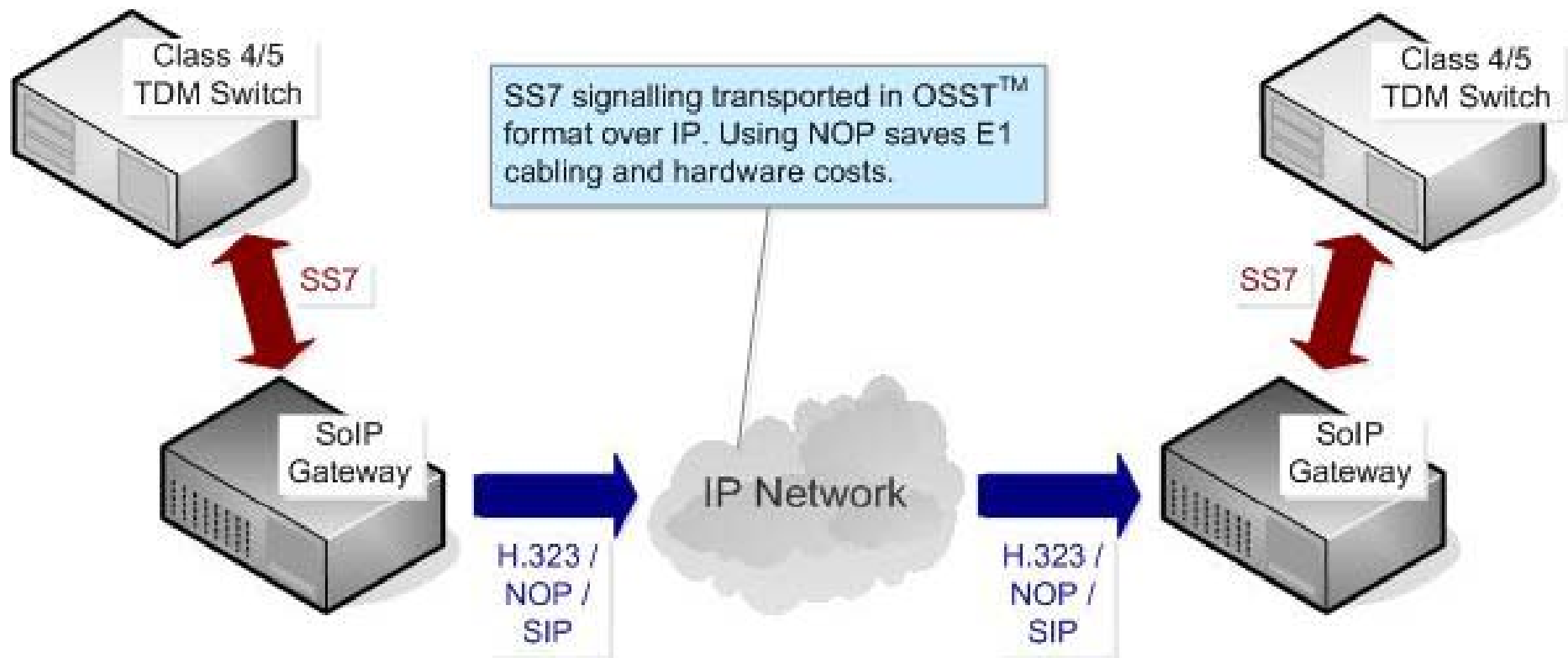
Central SS7 Signalling Node With Remote Trunks



SoIP Typical Applications

- Link legacy networks to VoIP carriers
- Extend life of existing Class 4/5 switches
- Central signalling with distributed trunks
- **SS7 tunnelling through a VoIP network**

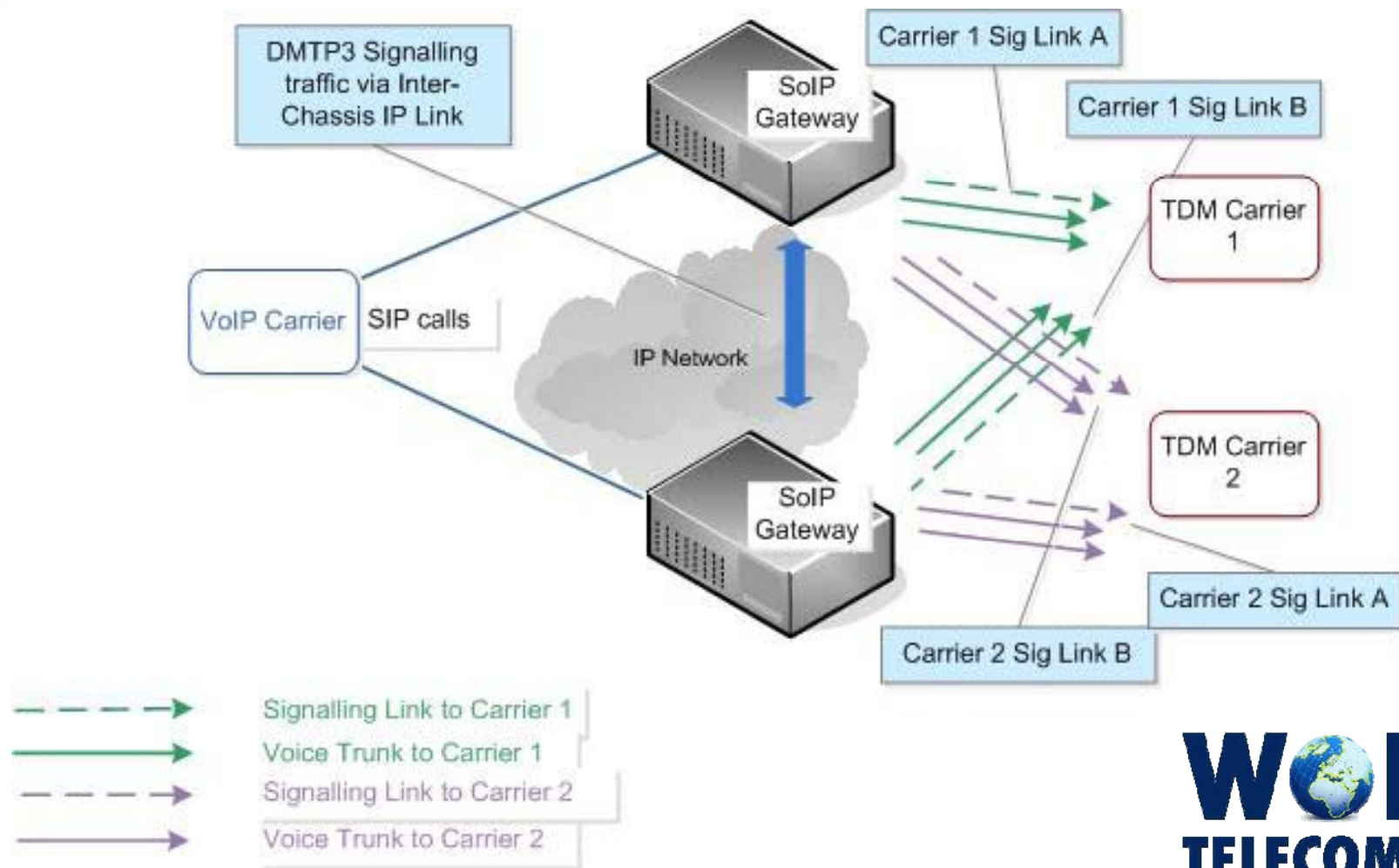
SS7 Tunneling through IP Network



SoIP Typical Applications

- Link legacy networks to VoIP carriers
- Extend life of existing Class 4/5 switches
- Central signalling with distributed trunks
- SS7 tunnelling through a VoIP network
- **Resilient solution for SS7 interconnect**

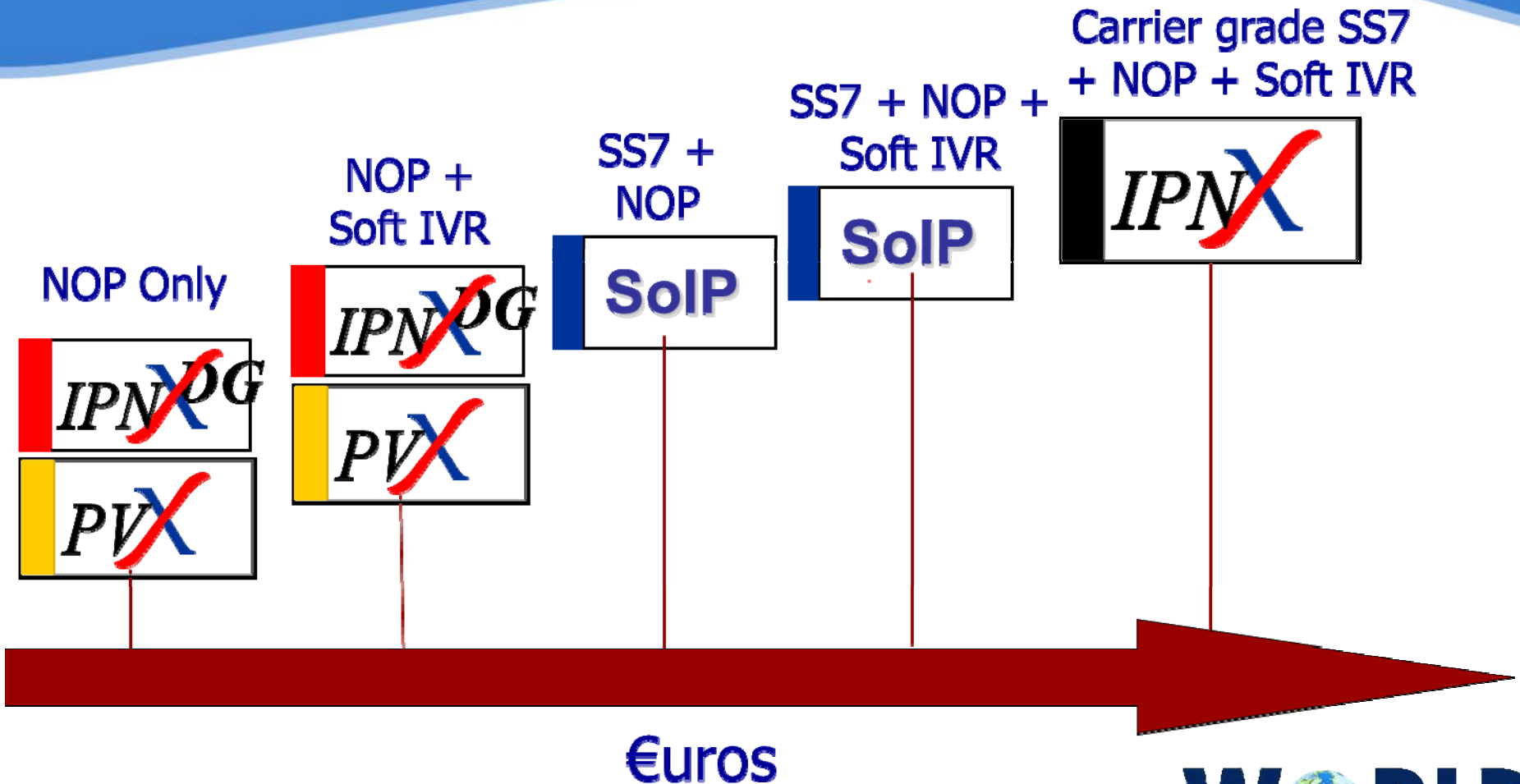
Resilient SS7 Architecture



SoIP Typical Applications

- Collect VoBB subscribers' traffic
- Connect Next-Gen Application Servers to TDM networks
- And pure signalling gateway

WTL Product Positioning



SoIP Layout (Front)

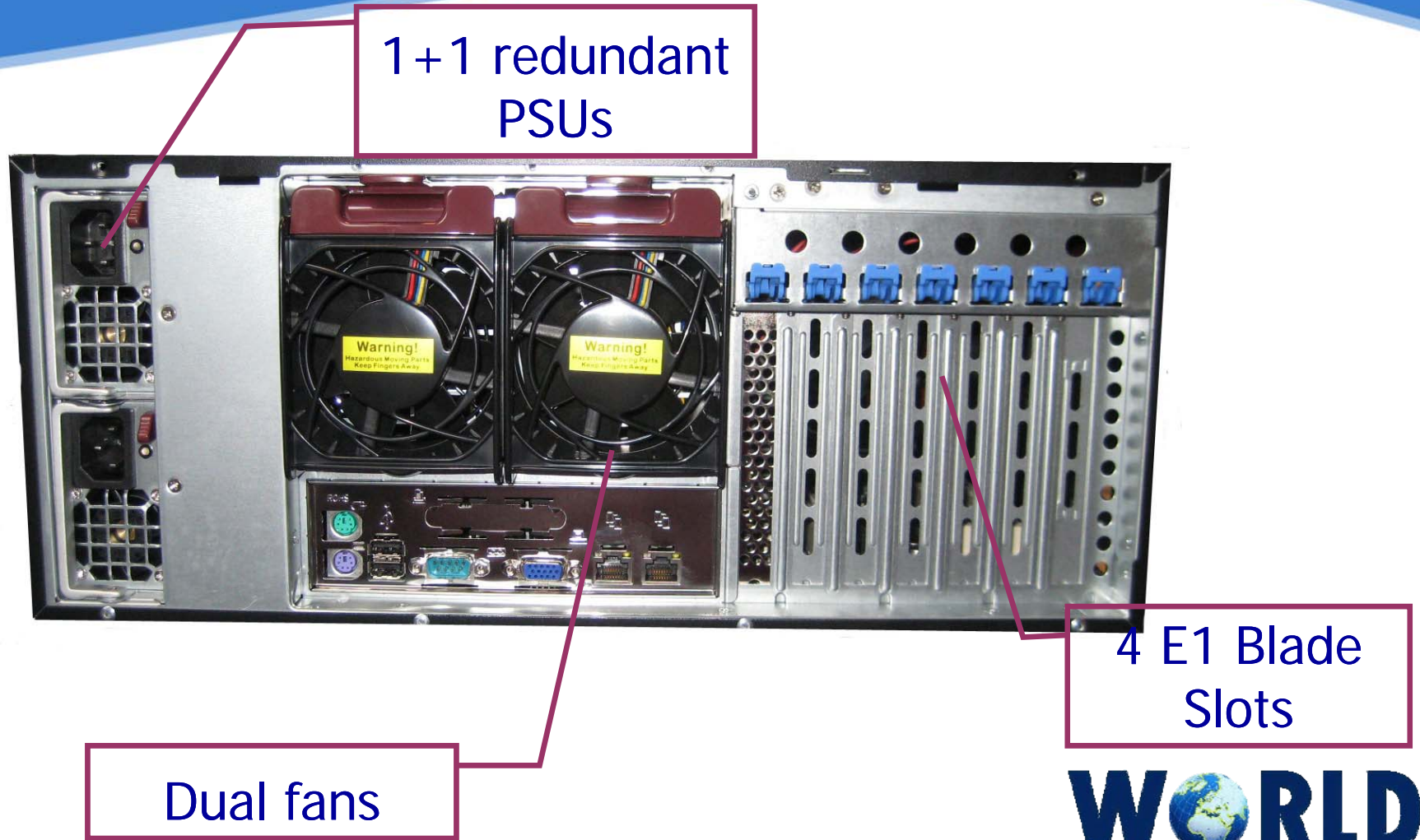


CPU: Opteron
2 GHz

Triple 80GB
RAID5 Disks

4U high
755 mm deep

SoIP Layout (Rear)



1+1 redundant PSUs

Dual fans

4 E1 Blade Slots

Building Solutions

- Chassis has 4 slots
- Slots take any mix of 2, 4 or 8 E1 cards
- = maximum of 32 E1 per chassis
- Price includes one SS7 signalling link pair to a single carrier.
- Management tools available

Management Tools

- SW Config – Web-based configuration utility
- SW Check - SoIP health and operation monitor (Nagios-based)
- SW Helpdesk - examination and analysis of call traffic

SW Config – Easy Set Up

The screenshot displays the 'View Hardware' page of the WTL Switch Configurator. The browser window title is 'View Hardware - Microsoft Internet Explorer'. The address bar shows the URL: `http://192.168.0.101/view_hardware.htm?part=sethw&slot%5B%5D=12&slot%5B%5D=10&slot%5B%5D=9&slot%5B%5D=7&s`. The page header includes the WTL logo and contact information for World Telecom Labs NV, located at Diegemstraat 42, BE-1930 Zaventem, Belgium. The page title is 'WTL Switch Configurator' and the current time is 'Mar 08 11:59:07'. The main content area is titled 'ipnx1 Rear View' and shows a rack of hardware slots from Slot 7 to Slot 0. Each slot has a 'Setup' button and a dropdown menu for the hardware type. Slot 7 contains a CPU (KT3xx). Slots 5, 4, 3, 2, and 1 contain TP1610 modules with 16, 8, 4, 2, and 0 ports respectively. Slot 0 contains an NS301 module with 8 ports (A-H). A 'Set Hardware' button is located at the bottom of the slot configuration area. The left sidebar contains a 'Main Menu' with options for 'Loaded Modules' (Unix Settings, HW Device, MTP3 Stack, ISUP Stack), 'DMTP3', 'Inral Tables' (ipnx1Tables), 'Save config', 'Reset config', and 'Select IPNX debug'. The footer contains the copyright notice 'Copyright: ©2004 WTL - World Telecom Labs' and a 'Links: Contact Us' button. The WTL logo is also present in the bottom right corner.

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| Support Site | Partner Site | WTL Website |

WTL Switch Configurator Mar 08 11:59:07

IPNX: ipnx1

Main Menu

Loaded Modules

- Unix Settings
- HW Device
- MTP3 Stack
- ISUP Stack

DMTP3

Inral Tables
ipnx1Tables

Save config
Reset config

Select IPNX
debug

ipnx1 Rear View

Slot 7	Slot 6	Slot 5	Slot 4	Slot 3	Slot 2	Slot 1	Slot 0
Setup	Setup	Setup	Setup	Setup	Setup	Setup	Setup
CPU	KT3xx	TP1610/x/16	TP1610/x/8	TP1610/x/4	TP1610/x/2	TP1610/x/0	NS301

Set Hardware

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SW Config – Features

- Web-based
- Secure (https)
- Fully graphical, point & click
- All entries value checked
- Parameters can be changed in real time
- Supports multiple switches

SW Config – Status Displays

- Carrier status:

Carrier Summary									
Carrier	Name	Capacity	In Now	Out Now	Max In	Max Out	Max Both	ACD (secs)	ASR %
25	MCI2	31	25	5	28	19	32	28	69
24	MCI1	31	24	4	29	20	32	30	65
23	BT3	31	23	4	30	18	32	30	67
22	BT2	31	19	7	29	18	32	29	70
21	BT1	31	19	4	28	19	32	29	78

- Resource Usage:

Hard Disk Usage (not updated live)						
File System	Mounted On	Partition Size (Mb)	Used (Mb)	Free (Mb)	Used %	Overview
/dev/dsk/c0t0d0s0	/	2031.7	912.2	1058.6	47.0	
/dev/dsk/c0t0d0s6	/usr	4128.4	2126.9	1960.2	53.0	
/dev/dsk/c0t0d0s1	/var	385.2	246.6	100.0	72.0	
/dev/dsk/c0t0d0s4	/usr2	26046.2	12.8	25772.9	1.0	
/dev/dsk/c0t0d0s5	/usr3	5208.9	7.2	5149.6	1.0	
/dev/dsk/c0t0d0s7	/export/home	95.6	0.0	86.0	1.0	

Thank You
www.wtl.dk

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