

PVx - The Packet Voice Xcelerator

Improve the performance of any VoIP link: less bandwidth per call, fewer packets per second, no loss of quality



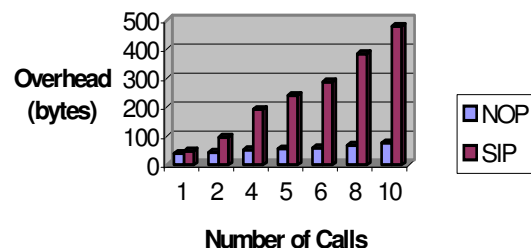
The PVx from WTL greatly improves the performance of VoIP links. This allows more calls per line or, on shared lines, allows a greater part to be allocated to data.

Standard SIP or H323 based VoIP gateways are normally very wasteful of bandwidth. This is because voice packets from each call are sent in different IP packets each with its own overhead. World Telecom Labs has solved this problem with the creation of NOP (Network Optimisation Protocol). This patented technique allows enormous reductions in overhead by combining voice packets from different calls and it leads to great bandwidth savings. On a 100 call link NOP will generate 25 times less packets than SIP or H323.

PVx will accelerate any SIP or H323 VoIP gateway, allowing the IP network to be used more efficiently.

As this table shows, the more calls the PVx carries, the better it performs.

NOP v. SIP Efficiency



	Number of Calls					
	1	2	10	50	100	1000
NOP	33 pps	33 pps	33 pps	33 pps	66 pps	660 pps
SIP/H323	16.5 pps	33 pps	165 pps	825 pps	1650 pps	16,500 pps

The no sweat way to get more voice for less IP

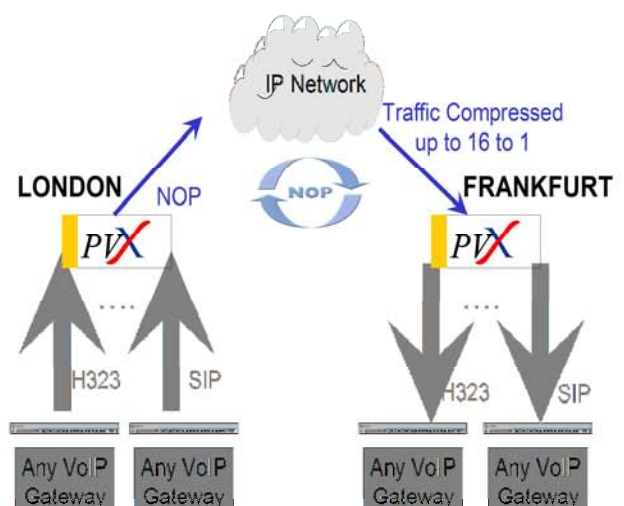
PVx has been designed to give the maximum payback in the shortest time:

- **Small size, big punch** – the PVx is a rackmountable unit just 1U high which handles 240 simultaneous VoIP calls (standard version) or 2U high handling 400 calls (High Capacity version). Small size minimises rack costs in your co-location.
- **Works with WTL gateways** – The IPNx Analog Gateway from WTL is the ideal partner for the PVx
- **Works with existing gateways** - Support for SIP/H323 means that all kinds of existing VoIP equipment can feed traffic onto a PVx link.
- **SIP and H323 support** – calls can even be converted from H323 to SIP
- **Fewer packets are generated** – this not only means less bandwidth is used but it also dramatically reduces the load on the router. This saves costs because a smaller router will do the job.
- **Simple set up, get started quickly** – a simple, web-based configuration utility is provided.
- **Stackable** – the PVx is totally stackable as the number of compressed calls increases.
- **Complete information on every call** – Comprehensive CDR (Call Details Record) is written to local hard disk for every call made. Allows integration with conventional call billing systems.
- **Proven in service** – World Telecom Labs has been supplying VoIP switching to many of the world's leading carriers for more than 8 years.

Cost Saving In Your Network With PVx

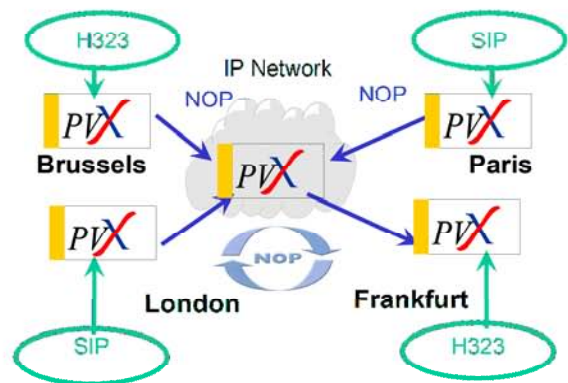
PVx allows you to start with a simple point to point configuration where multiple SIP/H323 calls from any source are routed through the Packet Voice Xcelerator, converted to NOP, and on to the corresponding unit at the other end of the link. Here the calls are converted back to SIP/H323 and delivered back to existing gateways. This technique will allow almost twice as many calls to be carried.

In the example, a 2Mb leased line from London to Frankfurt might cost \$15,000 per year. Before installing PVx this would carry a maximum of less than 200 simultaneous calls. With PVx that limit increases to 350 on the same 2Mb line. So PVx allows much more revenue from the extra calls carried but saves the \$15,000 cost of an additional 2Mb line. For less popular routes than London – Frankfurt the line costs are much higher and the PVx pays back even more quickly.



PVx Can Grow With Your Network

PVx will also allow more complex network designs. Another World Telecom Labs innovation:- Payload Switching combined with powerful routing software from our carrier exchange products means that PVx can examine incoming SIP/H323 packets and decide which of many IP routes to send them on. This is done in real time with only tiny delay and without decompressing and recompressing the voice packets. It means that the benefits of Packet Voice Xceleration can be applied to a network without having to treat it as a series of point to point links.



Specifications

- Maximum number of simultaneous calls:
- Standard - 240 High Capacity Unit - 480
- Maximum call set up: BHCC Rate (Busy Hour Call Completion) over 50,000 per PVx
- Protocol Support: H323 Ver. 4
- SIP RFCs 2327, 2543, 2617, 2833, 3261
- Voice codecs: G723.1, G726, GSM, G729, G711
- Temperature: 0 to +35°C
- Storage: -20 to +80 °C
- Humidity: 10% to 90% (non-condensing)