**VxDSL Services**
**The facts**
VxDSL offers the quality of service (QoS) required for supporting reliable voice applications by providing uncontended bandwidth.

VxDSL is fast becoming the standard technology that allows businesses to make and receive telephone calls without the need for an expensive ISDN circuit. The Quality of Service has contributed to its increasingly widespread adoption.

**The background**
ADSL-based internet connections have formed a key role in enabling VoIP services for SMEs. Combined with SIP trunks and IP-enabled PBX technology, this class of broadband allows businesses to make and receive telephone calls without the need for an expensive ISDN circuit.

However - standard ADSL products, as offered by many ISPs, have limitations when being used for voice applications. They do not offer the Quality of Service (QoS) required for supporting reliable voice applications. ISPs allow the sharing of bandwidth to reduce costs but this contention causes packet loss, delay and jitter, all of which minimise the VoIP experience.

**Key benefits of VxDSL**
VxDSL provides a number of customer benefits over existing backbone networking technologies. These include:

- **Remote Access Virtual Private Networking**
  VxDSL supports Remote Access Virtual Private Networking (VPN). Remote access to your network can be provided using Cisco VPN client software. This access allows users can reach ‘behind’ the provided router and access network devices and services from offsite.

- **Site to Site Tunnelling**
  If Voiceflex DSL services are provisioned at multiple sites, the supplied routers can be configured to provide connectivity between the sites. These tunnels can then be used to carry both Voice and Data traffic.

- **Quality of Service**
  VxDSL technology contains the mechanisms by which QoS is kept at a premium by providing uncontended (1:1) bandwidth. VxDSL does not have limitations when used for voice applications.

- **Performance**
  VxDSL simplifies large networks - which in turn enhances the speed of delivery of all services. Quality of Service and Traffic Engineering features maintain consistent performance levels, in line with those required by most commercial applications.

**Product Details**
- **Technology:** ADSL, ADSL2+, ADSL2+ Annex M, PPPoA
- **Router:** Fully managed by VoiceFlex. Cisco 877-K9 for ADSL & Cisco 877-K9-M for ADSL2+
- **Expected QoS:** RTT < 100ms, jitter < 40ms, packet loss < 0.4%.
- **Security:** Firewall, Cisco K9 security features.
- **Intended use:** Connectivity for VoiceFlex SIP trunks (see our SIP Trunk products). Mixed Voice and Internet traffic. Priority is given to voice traffic.
- **Contract terms:** 12 months.
- **Provisioning:** 15 days if analog line available with no-other DSL service, 20 days otherwise.
- **Sales channel:** Reseller only, not available direct.
- **Support:** First-line support by reseller, second and third-line support by VoiceFlex

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VxDSL provides effective support for voice and data

VxDSL supports all native IP applications and makes it possible to operate or enhance almost any current customer solution using a VxDSL network. VxDSL delivers the mechanisms to provide Quality of Service across a shared backbone network. It is also possible to support real-time applications for lower prices as opposed to using traditional networks that provide dedicated resources per customer or application. This allows voice applications to be supported effectively - a facility that is already starting to deliver integrated corporate voice and data solutions.

VxDSL Technical Specification

- Flexible
- High levels of scalability
- Support for Quality of Service features
- Support for real-time traffic such as VoIP
- High performance packet forwarding
- Support for traditional IP applications

<table>
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<th>ADSL Upload</th>
<th>G.711</th>
<th>G.729</th>
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<td>Minimum</td>
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<td>Maximum</td>
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<td>4 calls</td>
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<td></td>
<td>Maximum</td>
<td>880 kbps</td>
<td>7 calls</td>
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For more information on how a Voiceflex VxDSL system can benefit your business, please contact us.

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