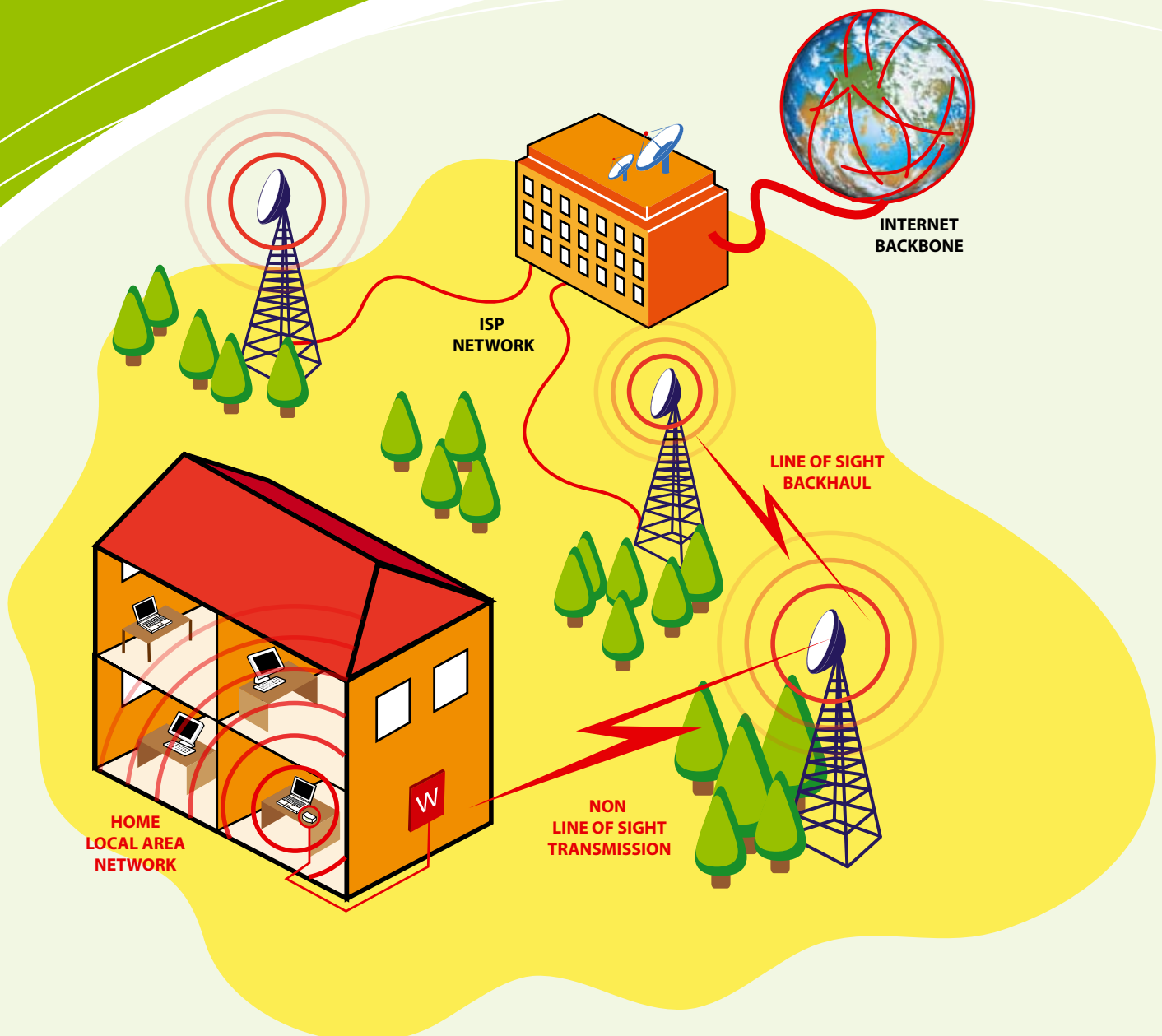


C-COR REACH[®] wireless broadband

REACH is first in “last mile” solutions.

REACH provides broadband access to places where technology has yet dared to go. REACH encompasses the needs of emerging markets where environmental or financial challenges have formerly proved too difficult; delivering a wireless access solution that provides community access to high-speed broadband data for every single end-user.





C-COR REACH[®] wireless broadband

Providing fast, cost-effective broadband access in rural, remote and emerging markets has always been a challenge. Standard technologies sacrifice speed or coverage and cost of infrastructure restricts many remote or geographically challenging areas. REACH is C-COR Broadband's ideal broadband solution that addresses all those problems, providing a high level network hierarchy that gives the same access to community, business and personal end-users, even in the most demanding conditions.

REACH for the future

REACH completes the suite of top and lower tier wireless solutions. Utilising WiDOX[®] technology, it's high level robust network compliments the range of end-user solutions, with sufficient power for current needs and the inherent ability to "step-up" for future demands.

In emerging markets where existing wire-line infrastructure for broadband service is not available, new generation wireless based broadband access networks can provide cost effective video, voice and data services that up to now have been beyond the market's capacity to finance.

For the service provider, standards-based products with fewer variants and larger volume production will drive the cost of equipment down.

For end-users, WiDOX delivers high level and consistent speed and throughput, regardless of subscriber growth or extended coverage.

Why C-COR chooses Wireless DOCSIS (WiDOX) based technology

C-COR Broadband is an independent provider of integrated broadband carrier-grade products and accessories from best-of-breed vendors. Because we work with the world's best, we deliver the latest technology and quality equipment that equips our markets not only for current needs, but also for future growth.

What is WiDOX

WiDOX links proven cable equipment with wireless equipment to provide the full suite of video, voice and data telecommunication services. For communities that do not have wired broadband infrastructure, WiDOX based technology is a cost effective solution for delivering fixed point to point or point to multipoint broadband services from a new or existing wired backbone.

Data Over Cable Service Interface Specifications (DOCSIS) based technology has already provided the platform for Cable Television Service Providers worldwide. WiDOX marries DOCSIS CMTS and cable modems with Radio Frequency (RF) interfaces to provide full two-way video, fixed voice and broadband data access.

WiDOX is suited to operations in the lower frequency bands, like 700 MHz, where less power is needed to reach the same or longer distances than higher frequencies. The architecture also reserves and dynamically allocates bandwidth to achieve high service levels for voice operation.

A single base station has enough bandwidth to simultaneously support more than 60 businesses or hundreds of homes with an average throughput of greater than 6 megabits per second (peak rate is 40Mbps) over a distance of 15 kilometres.

The WiDOX advantage

Unmatched high level performance

WiDOX based architecture can deliver robust fixed point to point or point to multipoint service broadband comparable to or better than ADSL.

WiDOX superior technical performance

Nomadic or cellular type technologies face problematic last-mile challenges and sacrifice data speed or throughput under an ever-expanding subscriber base. WiDOX broadband delivers data characteristics similar to Wireless LAN but with performance abilities far outweighing cellular type technologies.

WiDOX comes through loud and clear on all counts.

	Cellular	WiMAX	WiDOX
Peak data downlink rate:	7.2 Mbps max	18 – 75 Mbps <i>Requires 20 MHz channel</i>	14 – 40 Mbps <i>2 or 6 MHz channel pair</i>
Peak use throughput rate:	3 Mbps	1-3 Mbps or 80% performance	6 Mbps regardless of end-user numbers
Access method			TDMA downstream using 64QAM in a 6MHz or 8MHz channel. TDMA burst upstream using QPSK or 16QAM in 200KHz to 3.2MHz bandwidth. Optional upstream using SCDMA or A-TDMA.
Duplexing	TDD	TDD (802.16d) FDD (802.16e)	FDD
Outdoor range:	2 – 10 kms	2 - 10 kms	15 kms

Comparable tests continue to prove that WiDOX offers the end-user the greatest throughput and carrier-grade scalability. Furthermore, WiDOX links naturally to WiFi based access networks to provide end-users in rural and remote areas with the lowest possible cost connectivity options.



Image courtesy of Ministry of Tourism, Government of India.



Emerging markets get access to broadband

WiDOX is suited to countries just beginning to expand telecommunication services where wired lines do not currently exist. Existing proven technology allows for immediate installation – or, it can use existing tower infrastructure and quickly and relatively easily provide network access to multi-use subscribers.

Simple network design comes as standard

WiDOX UHF networks offer industry standard protocols already in use by millions of subscribers. The simple base station design delivers a large amount of bandwidth over a wide coverage area.

Standard components have already demonstrated high performance and reliability with proven commercial operation

Flexible configuration options are normal

WiDOX can be simultaneously deployed to meet the equivalent of both point to point and point to multipoint requirements. A single base station can support up to 3000 users with a full bandwidth distance of greater than 20km's. Industry standard tools and diagnostic utilities allow for remote monitoring of the system and easy subscriber billing.

Superior performance is an everyday event

Using a choice of modulations and error correction, Near Line of Site performance is achieved over a tremendous range. With its full duplex technology, WiDOX can deliver bandwidth capabilities beyond competing technologies.

No surprises with exceptional security, provisioning and Quality of Service.

The platform also offers excellent security with telecommunication carrier industry standard encryption to ensure secure data delivery and exceptional reliability. Each subscriber can be individually controlled with a variety of service options that are easily provisioned.

Superior Voice Capability from proven technology

Millions of subscribers world wide rely on the underlying DOCSIS technology for their voice services over cable networks. Guaranteed levels of service ensure call completion and minimal interference.

Potential to provide real time digital video broadcast

Rural communities can now look forward to television services that to date have been impossible to deliver at equivalent city prices in remote areas that do not have broadcast facilities. IPTV can be delivered by WiDOX over a wireless network using open-standard based equipment. Video quality is not compromised in circumstances where bandwidth is limited and in fact WiDOX delivers good video quality with video bit rates of 2.5 Mbps.

Incredible Speed for business

With a higher spectral efficiency than many competing technologies, WiDOX can provide superior data rates for subscribers demanding high performance over relatively long distances, even under heavy use.

Choices in CPE are important to subscribers.

WiDOX offers a wide range of subscriber choices. These range from simple data modem to telephony devices supporting up to 12 separate lines. Devices that support E1 services are also available.

Interoperability and compatibility issues have been solved

Interoperability and compatibility between equipment suppliers is well developed and has decreased costs over time. Standardised components mean the whole package is available from a single vendor, simplifying installation, roll-out and serviceability.

Broad operating frequency spectrum flexibility

Customisable bands within the 470 to 862 MHz frequency spectrum is possible. Custom design is based on justifiable business case.



Image courtesy of Ministry of Tourism, Government of India.

REACHing out to the unconnected.

The C-COR REACH broadband solution offers complete coverage from design and planning support through to site support and field installation. For every project the company's network services team executes an integration and acceptance strategy that will deliver end-to-end performance.

C-COR Broadband's depth of experience in leading edge technology over the past decade coupled with our extensive network of technology partners both in Australia and internationally, delivers robust, cost effective and low risk solutions for our clients.

C-COR Broadband is a top tier systems integrator and represents a portfolio of industry leading vendors. The C-COR brand REACHes across the world, recognised as a leader in innovative solutions for broadband access and wireless systems.



C-COR Broadband

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