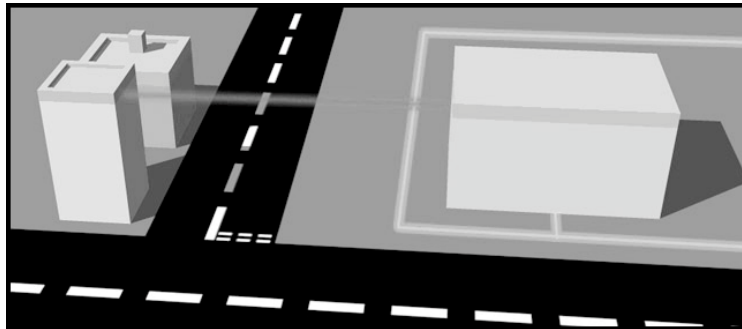


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## Application Note: Wireless Internet Service Provider (WISP)



### Scenario

Wireless Internet Service Providers (WISP) provide broadband wireless internet connections wherever traditional ADSL, cable or satellite services are either unavailable or uncompetitive.

WISP networks demand low-cost but highly-reliable equipment to provide “xDSL equivalence” of service with upgrade path for modern services demanding Quality of Service (QoS) such as VOIP, VOD and IPTV.

WISP networks typically use licensed 3.5GHz or unlicensed 2.4 or 5.3/5.8GHz frequencies to provide connectivity both to end-users and for the back-haul network. Additionally, FSO links may be used in the network for short-range, high capacity links.

In comparison with existing solutions CableFree provides high-capacity, highly reliable and rich-feature-set wireless products with high levels of integration and low cost of ownership. Extended frequency ranges of 2.3-2.5 and 4.9-6.1GHz are available. CableFree products offer up to Gigabit capacity, low costs, advanced feature-set compared to existing radio offerings and are installed in hours, not weeks.

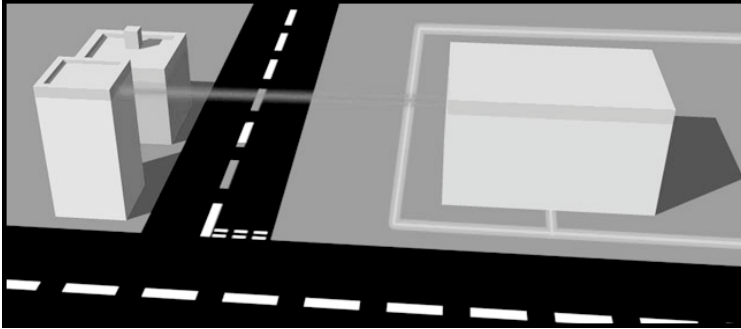
### Solution

A CableFree solution offers the following features and benefits:

High performance:	Gigabit Ethernet FSO, 72Mbps radio
Rapid installation:	3 hours achievable; 15 minutes on tripods
Highly reliable:	99.999% availability achievable
License-free Operation:	No fees to pay
No monthly rental fee:	Low maintenance solution
Diverse technology options:	Free Space Optics & Broadband Radio
Fully manageable:	Advanced software tools
Resilient solutions:	1+1 FSO+radio dual link options
Low Total-Cost-of-Ownership (TCO):	Moveable asset
Safe & Environmentally friendly:	Low disruption during installation

CableFree products are field-proven, with thousands of deployments in over 50 countries since 1997. Excellence in performance and reliability are not sacrificed in providing highly competitive priced solutions together with a comprehensive range of support services.

## Application Diagram



Two or more vehicles or buildings are connected by CableFree wireless products. Clear Line-of-Sight (LOS) for FSO or Near-Line-of-Sight (NLOS) for radio is required.

The network connections (10/100/1000Mbps Ethernet) are connected directly to the wireless units which can be mounted on tripods, rooftops, towers, poles or behind windows.

A site survey is recommended before installation, to determine suitable mounting points, location of cable runs etc. Installation involves physically mounting the equipment, aligning it, connecting data and power circuits and commissioning.

## Recommended Systems

<b>CableFree Access</b>	Connectivity up to 155Mbps, range up to 4km
<b>CableFree 622</b>	Connectivity up to 622Mbps, range up to 2km
<b>CableFree Gigabit</b>	Gigabit Ethernet and Fibre Channel up to 1.5km
<b>LaserHop</b>	E1, Fast and Gigabit Ethernet up to 1km
<b>CableFree HPR</b>	Radio links up to 72Mbps, range up to 40km
<b>CableFree MPR</b>	Radio links up to 30Mbps, range up to 40km

## Data formats supported

E1/G703 2Mbps • E2 8Mbps • E3 34Mbps • T1 1.5Mbps • STM-1 & STM-4 •  
Ethernet 10, 100 & 1000Mbps • ATM-155 & 622Mbps, Token Ring • FDDI •  
Fibre Channel • Broadcast Video and CCTV •  
Multiplexed voice and data 10+2 and 100+2 solutions available

## For more information, please contact CableFree

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