

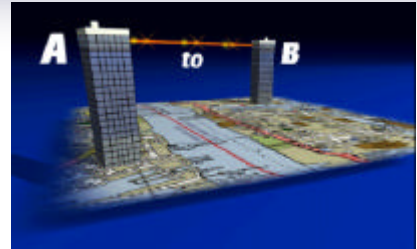
# Cablefree Solutions Limited

*Leaders in Free Space Optics*

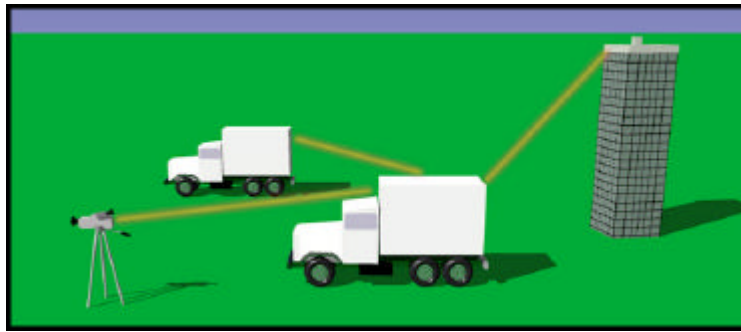
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## Application Note No. 2 Cablefree in Outside Broadcast Applications



### The Scenario:

Outside Broadcast and Television News reporting demand innovative solutions to communications problems – and with today's all-digital environments, high integrity feeds and very high data rates such as 270Mbps SDI are often required.

Connecting remote cameras to OB vans, mixing/edit facilities or hopping feeds between difficult-to-access areas and tall buildings may not be suited to traditional solutions such as leased-line, fibre-optic, copper cable or microwave links – all of which have associated penalties.

With **Cablefree** many of these problems are solved:

- Microwave links typically 34Mbps, **Cablefree** easily achieves 270Mbps at 2,000m
- Copper 270Mbps SDI connections limited to 300m, **Cablefree** offers 2,000m
- High quality analogue Composite Video option offers 9MHz with 67dB SNR
- No site or frequency licenses required
- No leased-line rental or connection charges
- Rapid Deployment, temporary or permanent use
- Wide range of data interfaces allows 'plug-in-and-go' for any format
- No risk of interference, signal reflections or airport radar systems
- Cost-effective solution

### 1. CableFree in a typical Outside Broadcast environment

Outside broadcast companies undertake coverage of a diverse range of live events such as winter sports, state ceremonies or motor racing. Signals from a number of cameras need to be relayed to an OB van or to the mixing desk / directors console. Using **Cablefree**, high-quality analogue composite or 270Mbps Serial Digital television signals may be connected without need for cables, expensive leased lines or low-bandwidth microwave links requiring site and frequency licenses.

## **2. CableFree makes Headline News**

Television newsgathering today imposes increasing demands on equipment and human resources: up-to-the minute content must be fed direct from a disaster area, terrorist siege or war zone, and time is of the essence. Television signals need to be relayed from a camera to the satellite up-link, often via a high-bandwidth network connection – which may be unavailable locally or take precious time to organise.

**Cablefree** allows high-quality analogue or uncompressed digital pictures to be carried using a flexible line-of-sight system that can be rapidly deployed on tripods and powered from 12 volt batteries. With no need for frequency allocation or licensing, **Cablefree** can be deployed anywhere in the world and even used in war zones with no risk of interference with military communication systems.

## **3. CableFree provides temporary extensions to Post-Production house networks**

Modern Post-Production houses work with tight deadlines – and quality counts. High-speed ATM networks offer point-to-point transport of digital content between facilities, but only where the cables are installed. What happens if a new building needs connecting, or a studio booking is changed?

**Cablefree** offers the perfect solution – a high-performance network connection over line-of-sight paths over 1km with speeds up to 1500Mbps. Virtually all industry-standard interfaces and protocols are supported, including ATM-155, E3/G703 and SDI at 143 up to 540Mbps. Quick installation with no line-rental or connection costs!

### **Systems available:**

**Cablefree 622** for Composite or SDI connection up to 622Mbps, range up to 2km

**Cablefree Access** for E1/E2/E3 connectivity up to 155Mbps, range up to 4km

**Cablefree Gigabit** for 1.485Gbps HDTV up to 1000m

All systems can be tripod-mounted for mobile use, or permanently installed on buildings

### **Broadcast standards supported:**

- SMPTE259 Serial Digital (SDI) D1 & D2 at 143, 177, 270, 360, 540Mbps
- Analogue Composite Video at 67dB SNR, 9MHz bandwidth
- E3/G.703 34.368Mbps for compressed digital video relay
- E1/G.703 2.048Mbps & E2/G.703 8.448Mbps for audio or data feeds
- ATM-155 & 622, STM-1 & -4 for 155 & 622Mbps networked video feeds
- Multi-channel composite video solutions available

### **For more information, please contact CableFree:**

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