



Advancing a Connected World

PCMA Hub Extender
How It Works

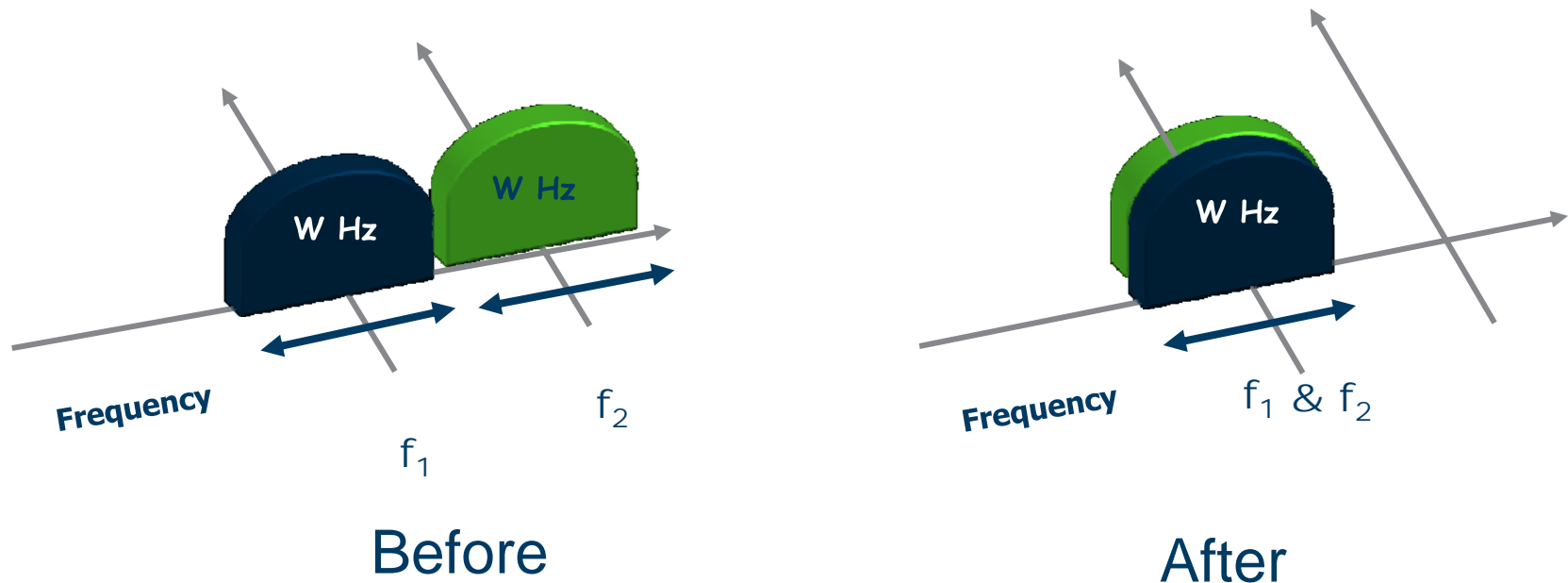
PCMA Hub Cancellor Overview

- Uses Paired Carrier Multiple Access (PCMA) to combine the uplink and downlinks transmissions into the same bandwidth
- Reduces satellite space segment costs and frees up bandwidth for new applications
- Works with iNFINITI TPC or Evolution DVB-S2/ACM satellite networks
- Located at hub location as an add-on technology enhancer

Cost-effective solution for capacity constrained networks that need to enhance utilization efficiency resulting in increased capacity of your iDirect network.

Signal Cancellation = Bandwidth Savings

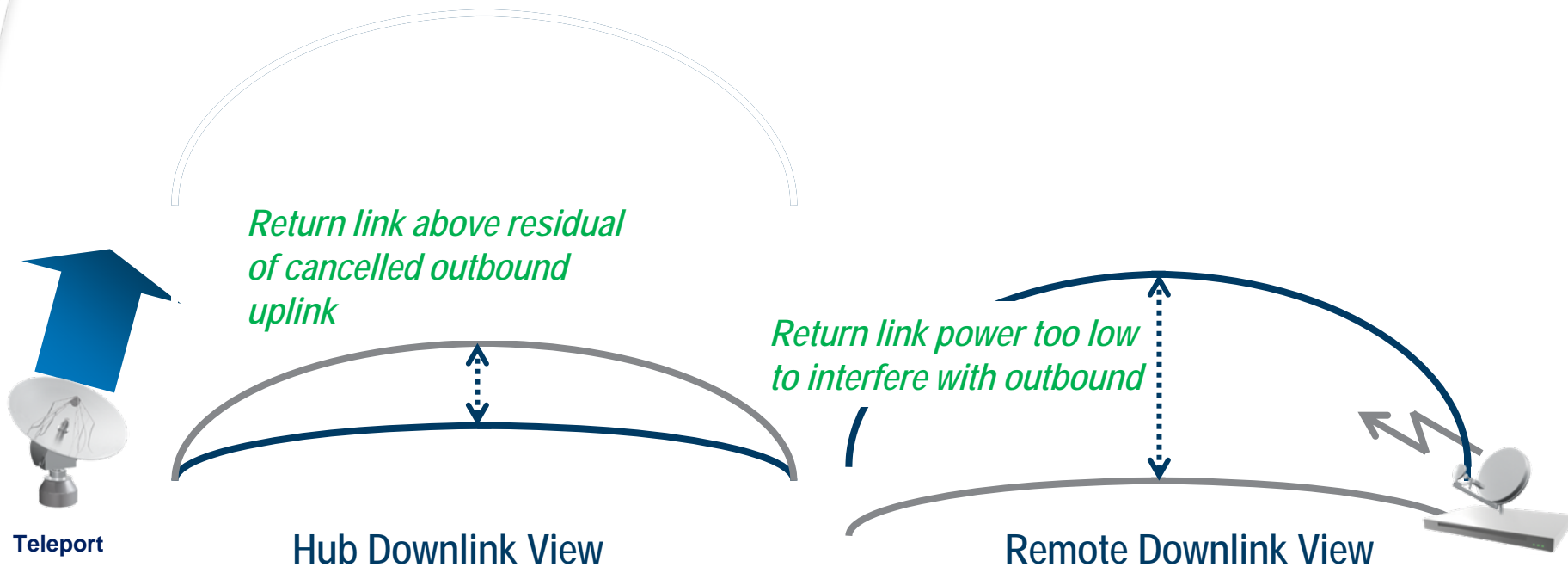
- Patented PCMA technology allows two different satellite signals to operate on the same frequency



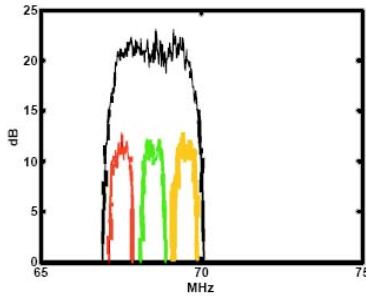
- Bandwidth savings can be as much as 50% (typical iDirect bandwidth savings 25-45%)

How It Works (cont)

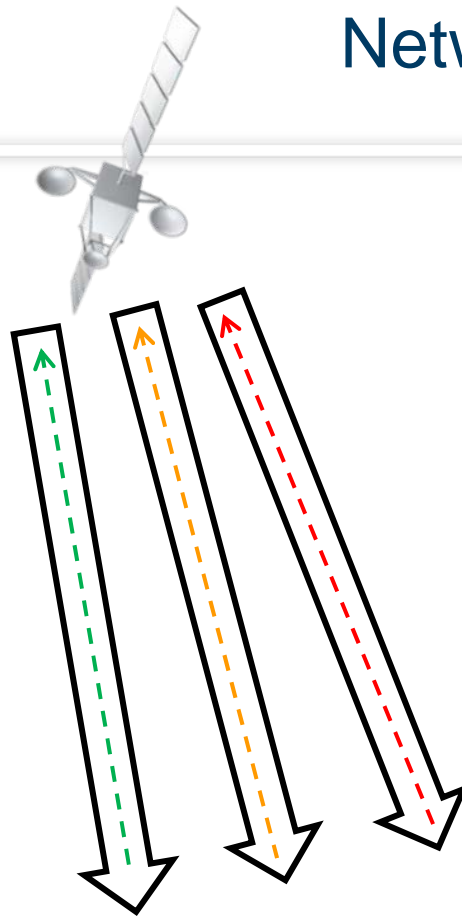
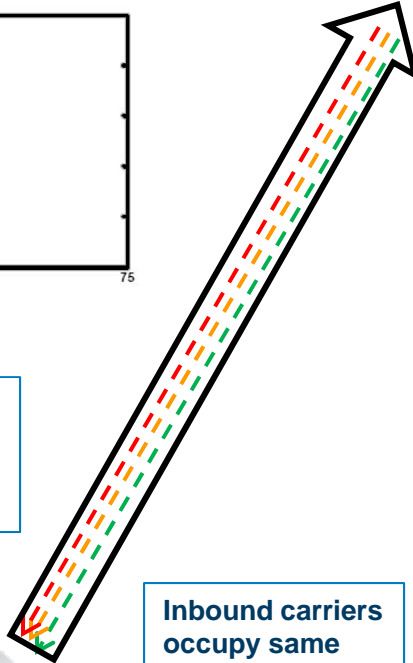
1. Hub transmits uplink signal
2. Hub cancels its received signal
3. Remote transmits a return link
4. Hub receives inbound return links from VSATs



Network Example



PCMA Hub Cancellor cancels out the overlaid outbound signal, leaving the inbound signals to be demodulated



Remote sites do not need Cancellor

iDirect Remotes



Technical Specifications

- Supports star topology networks and point-to-point SCPC links
- Cancels downstream carriers up to 36 MHz
- Works with all modulation types and FEC coding
- Available in 2MHz, 5MHz, 10MHz, 15MHz, 20MHz, 36MHz, 54MHz, 72MHz models in both single-thread and redundant forms
- 25 dB min forward carrier signal cancellation
 - Enables the TDMA demodulators at the hub to see the upstream carriers
- Standard 19" 1U rack mountable

