



3G Personal Repeaters

May 2010

Disclaimer

Nothing in these materials is an offer to sell any of the components or devices referenced herein. Certain components for use in the U.S. are available only through licensed suppliers. Some components are not available for use in the U.S.

Qualcomm's 3G Personal Repeater Technology: A New Class of Performance

Repeater benefits:

A Low Cost Solution to Increase Indoor Coverage

Opportunity to reduce churn—Indoor coverage main reason

Forward and Backward Compatible

Supports legacy devices and future devices

No backhaul requirements—Complement Femtocells

Excellent service in all deployment scenarios with no backhaul requirements

Qualcomm's technology:

Enables a Compact Single Box with Excellent Gain

Improved Voice *and* High Speed Data Coverage

Easy User Installation

Remote Management

Majority of Voice and Data Usage Indoors

“70% of all voice and data traffic indoor in 2008¹”

—Informa 2008

“By 2014, monthly worldwide mobile data traffic will exceed the total for all of 2008”

—ABI Research, August 2009

3G personal repeaters are a low cost solution to increase indoor coverage without backhaul requirements

Why 3G Personal Repeaters?

Low DSL/Cable penetration

Typically seen in many emerging markets

Operators without wireline assets

Simplifies fixed mobile substitution

3G in high bands—indoor coverage

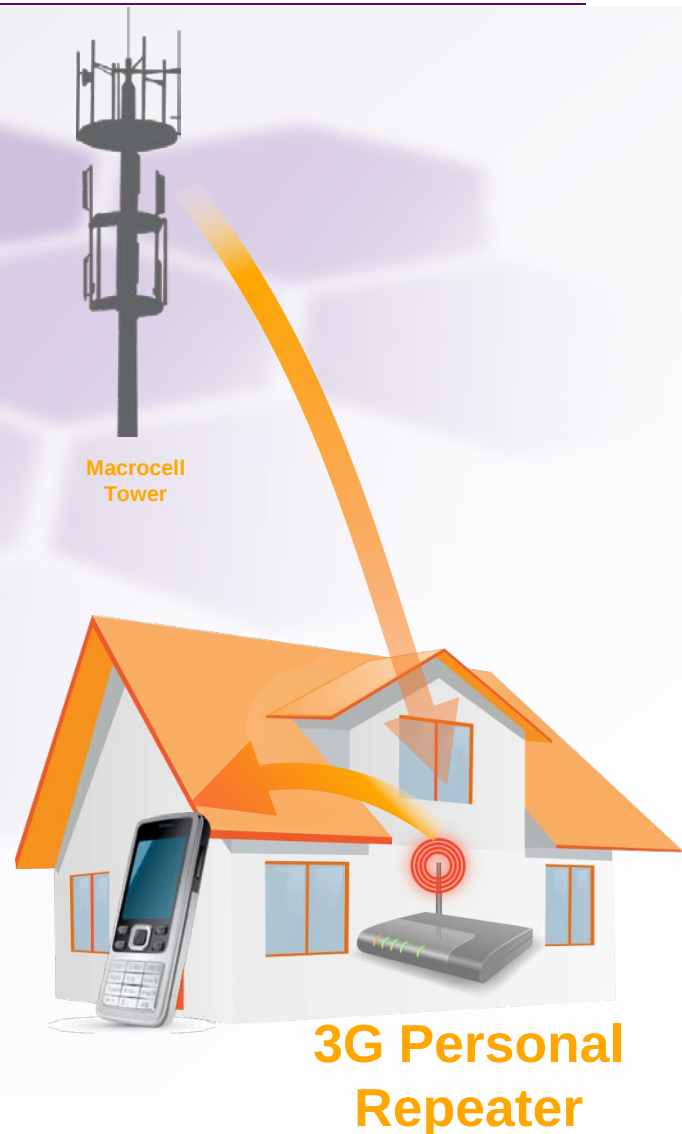
E.g. GSM sites reused to deploy WCDMA/HSPA in 2.1GHz

A complementary indoor coverage tool

In addition to femtocells, WiFi, DAS and other indoor solutions

A new class of plug and play repeaters

Single box repeaters with remote monitoring and control



Personal Repeaters Complement Femtos— Extend Coverage without Backhaul

Operator Benefits:

Enhanced Coverage

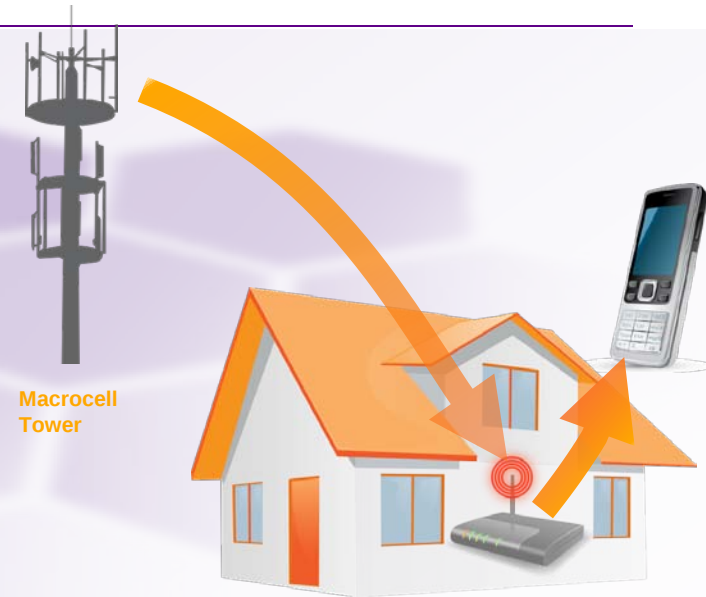
Standalone box with no additional network expenses

Reduced Churn and Cost

Indoor coverage main churn reason. Reduced backhaul, site cost

Forward Compatibility

Supports legacy devices and future devices



**Excellent Indoor
Voice and Data Coverage**

End-User Benefits:

Enhanced User Experience

Better voice quality and higher data rates with existing devices

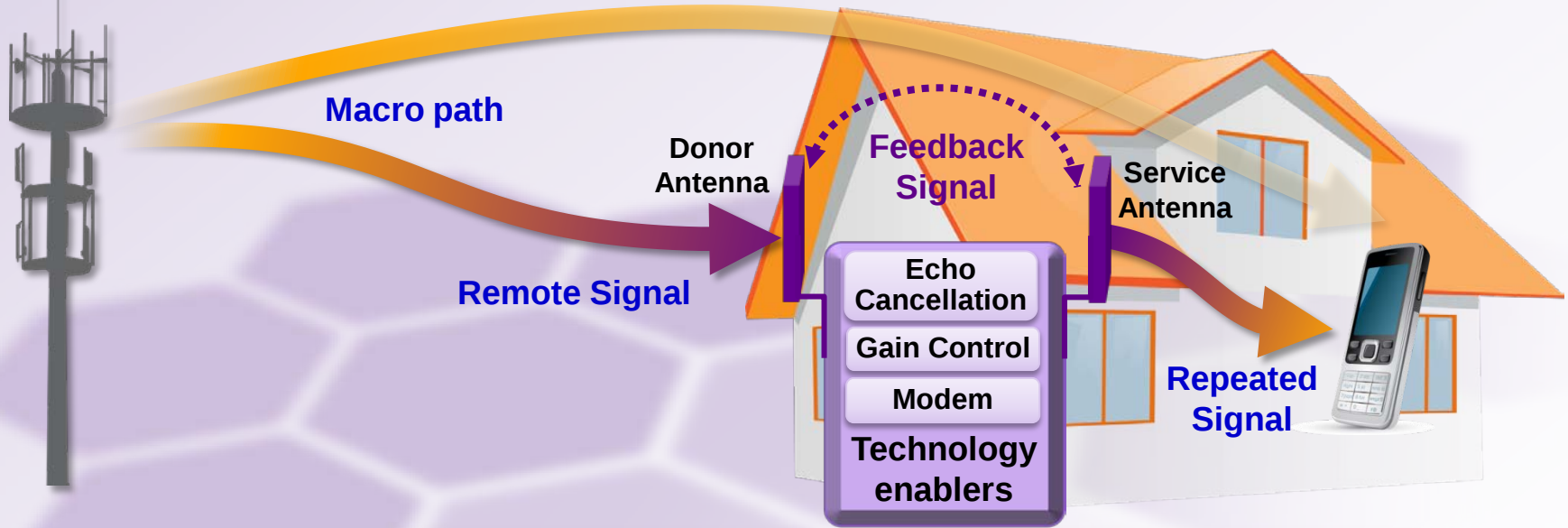
Can be Installed basically Anywhere

Fixed Internet connection (DSL/Cable) not required

Easy Installation by user

Compact , one box solution with self-configuration

Qualcomm's Personal Repeater Technology Enables a Compact Single Box with Excellent Gain



Improved indoor coverage and high data rates

High gain (80dB) through advanced antenna design and innovative echo cancellation
Active gain control for robust performance

Enables a compact single box—lower cost

Integrated donor and service antennas with high isolation

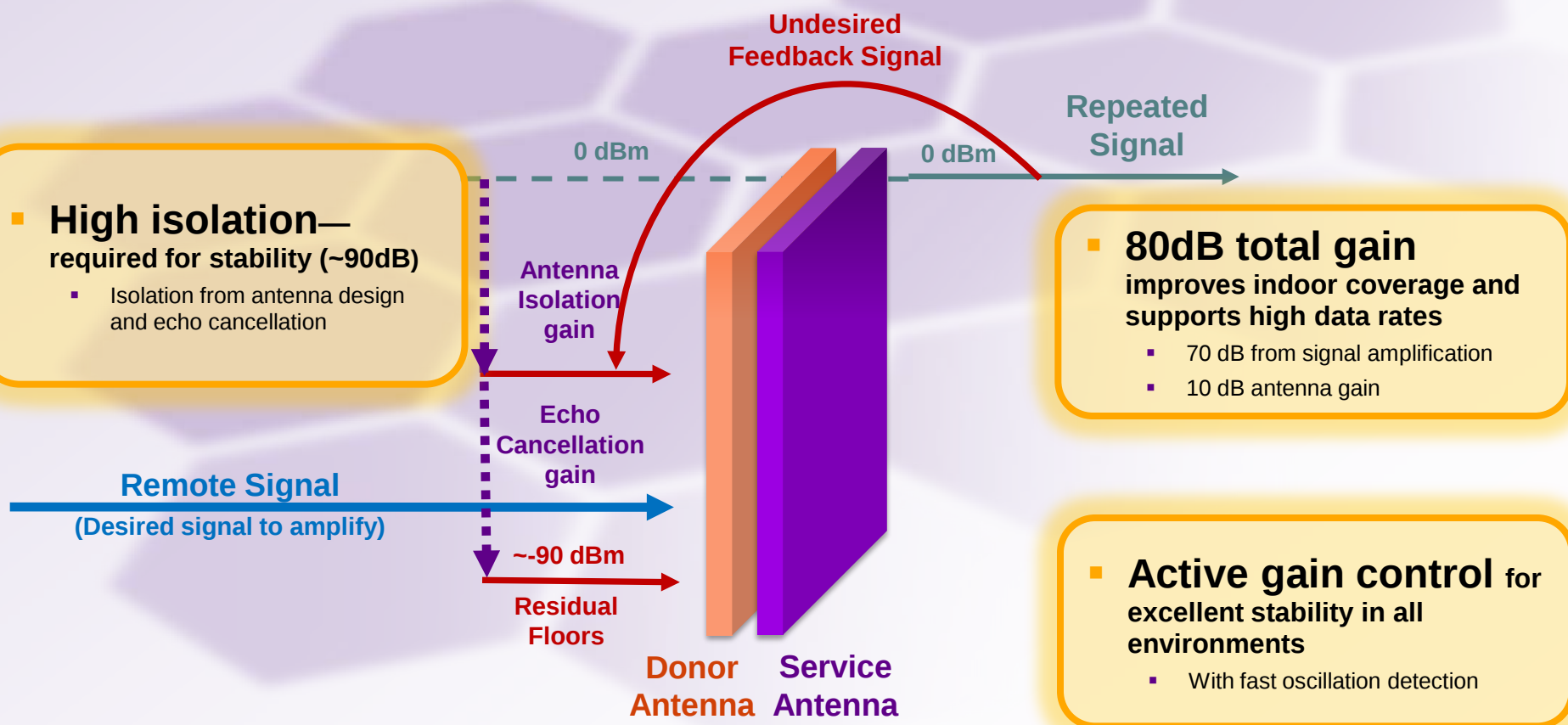
Easy user installation

One box installed by user—plug and play—no professional installation required

Remote Management

A New Class of Repeater Performance

Innovative echo cancellation, advanced antenna design and active gain control



Integrated Remote Management

Qualcomm's Technology

*Integrated
remote
management*

*Plug and play
with automatic
carrier selection*

- **Built-in modem for remote control and monitoring**
 - Remote provisioning and configuration
 - Collection of network statistics
- **Enables better network optimization**
 - Opportunity to optimize macro network performance based on collected network statistics
- **Plug and play—automatic configuration**
- **Automatic selection of carriers to repeat**
 - Repeats only operator authorized carriers

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Questions? Connect with Us



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Thank You

