



Future Networks 5th FP7 Concertation Meeting

BuNGee

Beyond Next Generation Mobile Broadband

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At a glance: BuNGee

Partner	Country
Alvarion Ltd.	Israel
ARTTIC in Brussels SPRL	Belgium
Centre Tecnològic de Telecomunicacions de Catalunya	Spain
Cobham Antenna Systems, Microwave Antennas (former European Antennas)	United Kingdom
The University of York	United Kingdom
Thales Communications SA	France
Université Catholique de Louvain	Belgium
Polska Telefonia Cyfrowa Sp. z.o.o.	Poland
Siklu Communications Ltd	Israel

*Beyond Next Generation
Mobile Broadband*

Project Coordinator

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Public Website: <http://www.ict-bungee.eu/>

Duration: 01, 2010 – 06, 2012

Funding scheme: STREP

Total Cost: €4,669,537

EC Contribution: € 2,975,953

Contract Number: 248267

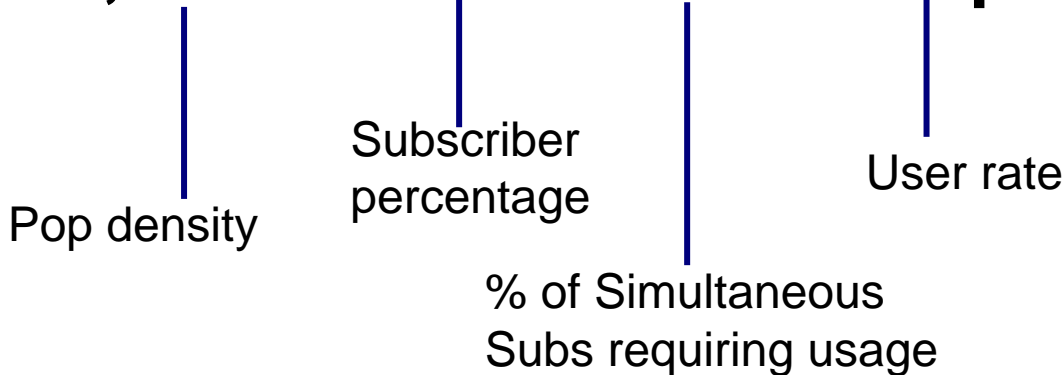
Introduction: What is BuNGee about?

- Breakthrough in Capacity Density

- Target >1Gbs/km²
- **Future** state of the art < 100mb/sec/km²

- Mass market generated capacity densities

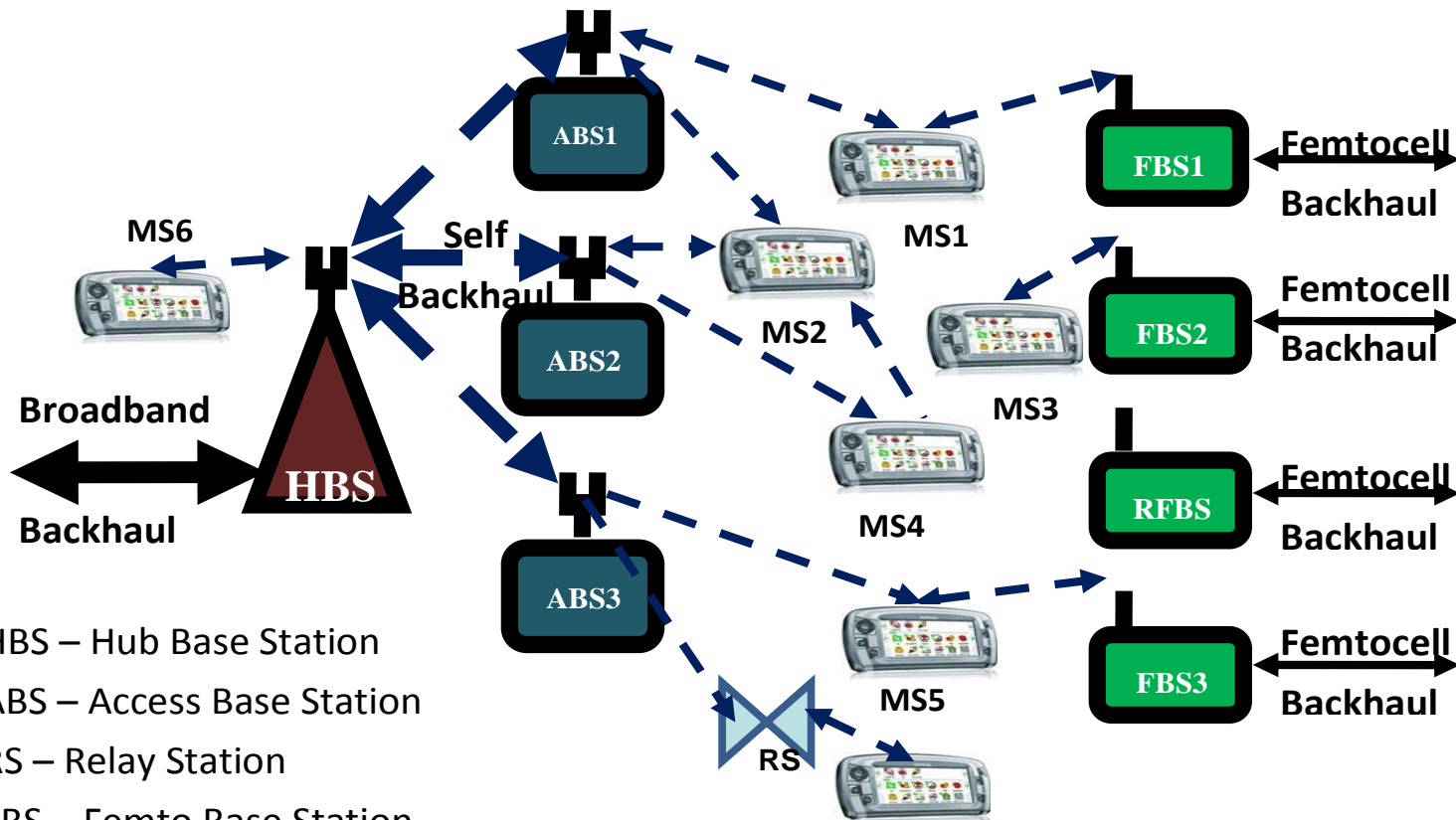
8,000 X 10% X 20% X 5Mbps = 800 Mbps/Km²



Paradigm shift

- BuNGee aims at invoking several fundamental paradigm shifts in ultra-high capacity designs which pertain to:
 - joint design of access and backhaul over licensed and license exempt spectrum;
 - below-rooftop backbone solutions exploiting natural radio isolations;
 - networked and distributed MIMO & interference elimination techniques;
 - autonomous architectures capitalising on very aggressive spatial and spectral reuse;
 - complete protocol suite facilitating autonomous ultra-high capacity deployment

BuNGee System Architecture (high level)



HBS – Hub Base Station
 ABS – Access Base Station
 RS – Relay Station
 FBS – Femto Base Station
 RFBS – Restricted FBS

Live Test

- *We envisage a new deployment model: very dense under-roof Access Base Stations, which will reduce the path loss to/from subscriber terminals, while providing high capacities.*



- ABSs are compact outdoor BSs, to be deployed at minimal lease cost on electricity poles, traffic lights, traffic signs.
- The HBS can be mounted in the same way or can be mounted over the roofs.
- The deployment uses the natural building isolation.



Thank You!