

# iBurst Commercial Service in Lebanon

Operator : Cedarcom Broadband

Service started in December 2006.

URL : <http://www.mobi.tm>



Cedarcom started “mobi” iBurst Commercial Service in Beirut, the capital city of Lebanon and Tripoli.



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# New Operators of iBurst Commercial Service

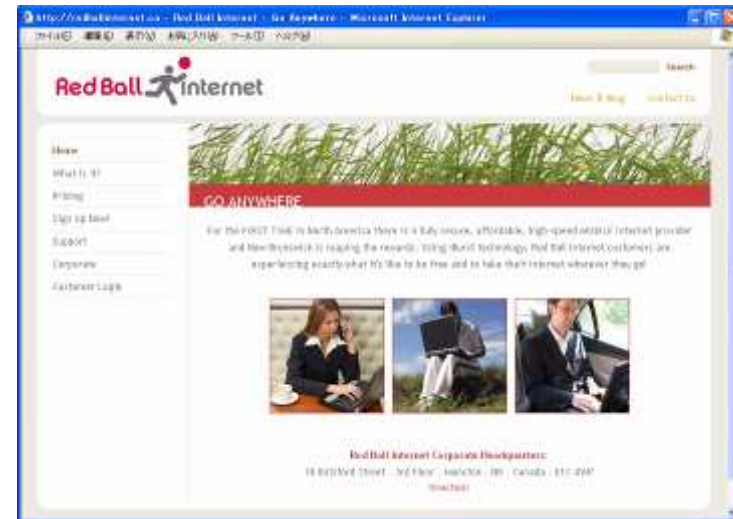
## ◆ Canada



Operator : Yamatech Group Inc.

Service started in October 2006.

URL : <http://redballinternet.ca/>

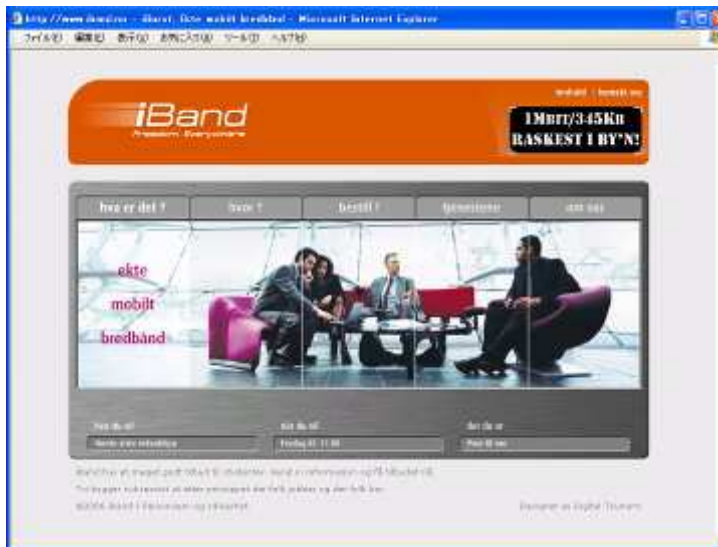


## ◆ Norway

Operator : iBand

Service started in September 2006.

URL : <http://www.iband.no>



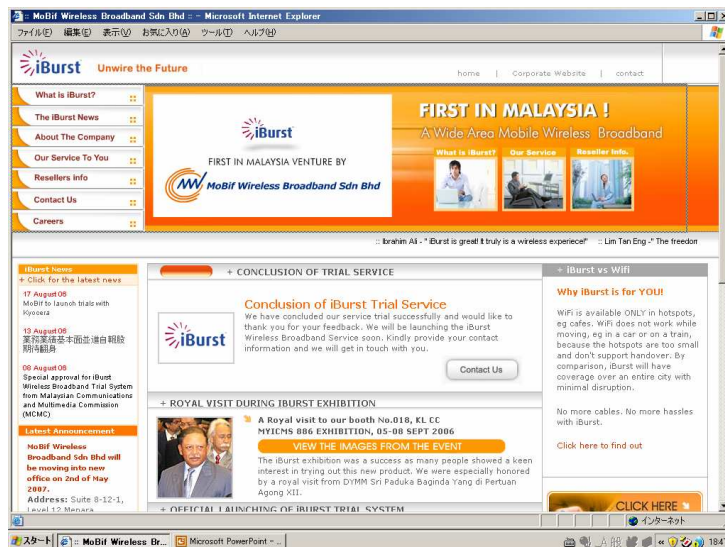
# New Operators of iBurst Commercial Service

## ◆ U.S.A.

Operator : Redwood Wireless

Service started in May 2007.

URL : <http://redwoodwireless.com/>



## ◆ Malaysia

Operator : MoBif Broadband

Service starts in July 2007.

URL : <http://iburst.com.my>



MoBif Wireless Broadband



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# Other Commercial Networks to be deployed

- ◆ Tanzania Africa on Line  
Commercial Service started in July 2007
- ◆ Cyprus Trial started in June 2007  
Commercial Service to start in 4Q 2007
- ◆ Oman Trial started in June 2007
- ◆ Netherlands Trial to start in 4Q 2007
- ◆ Saudi Arabia Commercial Service to start in 4Q 2007
- ◆ India Commercial Service to start in 4Q 2007
- ◆ **Other Countries:** Slovenia, Croatia, Indonesia, Vietnam,  
Ireland, Northern Ireland, More operators in the U.S.,

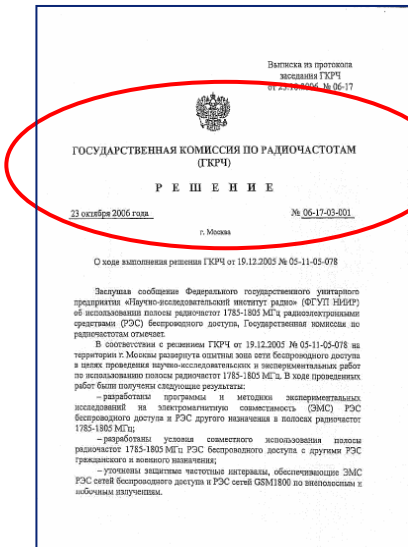
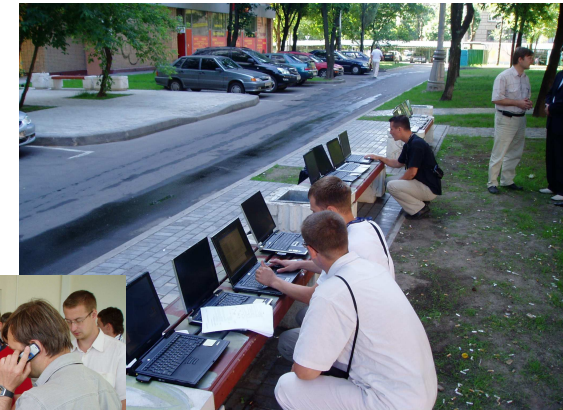
**Many Operators are expanding their operation to other countries.**



# What's happening in Russia?



**Field Trial in Moscow  
April – September '06**

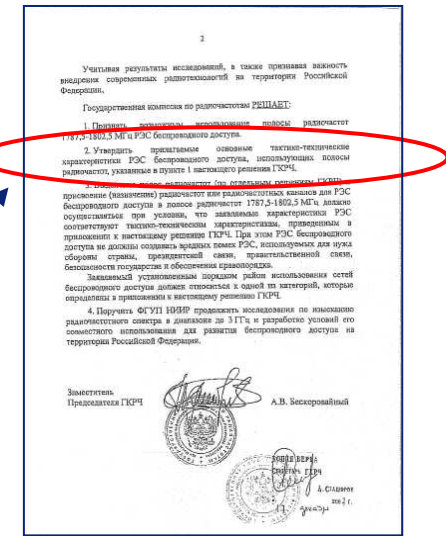


**State Frequency Management Commission (SFMC) RESOLUTION**

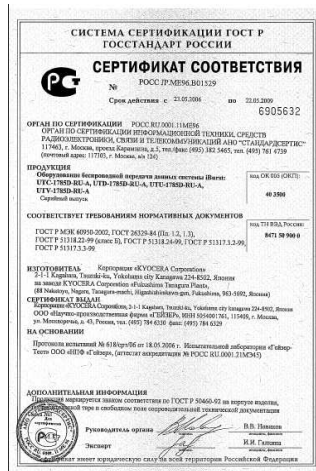
**October 23, 2006**

**State Radio Frequency Commission RESOLVES:**

**1. To recognize as feasible the use of the band 1787.5-1802.5 MHz by wireless access equipment.**



# What's happening in Russia?

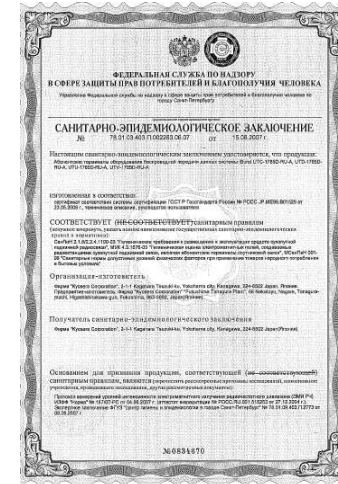


## GOST-R for Base Station & User Terminal

**May 23, 2006**

## Health Certificate for Base Station & User Terminal

**June 15, 2007**



## Certificate of Conformance by ANO "OSSET" 'for public communication network as radio access equipment for wireless data transfer...within the Range 1787.5 – 1802.5MHz'

**September 14, 2007**

**PRIME-TASS October 13, 2007**



Russia certifies Kyocera's iBurst wireless broadband system  
Japan's Kyocera has received certification from Russian authorities for the use of its wireless broadband system iBurst, the company said in a press release obtained by Prime-Tass Friday. The system is standardized as HC-SDMA, or High Capacity Spatial Division Multiple Access. It requires a frequency band of 5 megahertz for the total throughput of 32 megabits per second, the company said.

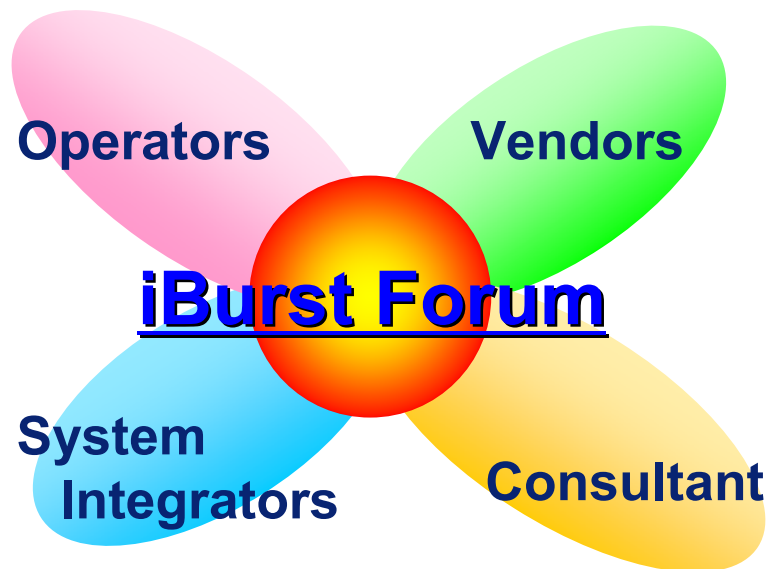
**Service implementation is under discussion with multiple operators**



## ◆ Promotion of iBurst by iBurst Forum

**iBurst Forum: A Forum by iBurst operators and vendors intending worldwide business development of iBurst system.**

<b>Past Event:</b>	<b>April 2004</b>	<b>Sydney, Australia</b>
	<b>December 2004</b>	<b>Singapore</b>
	<b>June 2005</b>	<b>Yokohama, Japan</b>
	<b>March 2006</b>	<b>Johannesburg, South Africa</b>
	<b>April 2007</b>	<b>Kuala Lumpur, Malaysia</b>





# iBurst Forum in Malaysia

28

## ◆ Formation of iBurst Association

**iBurst Association is to be formed. Preparation committee has been organized. Members are Operators, Vendors, Distributors, and any other iBurst related organizations.**



## ◆ iBurst Roaming MOU was signed

**9 iBurst operators signed MOU for International Roaming.**



**Cedarcom and Members of iBurst Worldwide Operators signed MoU for the launch of International Subscriber Roaming Access.**

CEDARCOM-MOBI  
4/28/2007 12:37:17 PM

Cedarcom and Members of iBurst Worldwide Operators signed MoU for the launch of International Subscriber Roaming Access.

Kuala Lumpur / Malaysia – Beirut / Lebanon 26th April 2007: After the successful launch of Mobi Cedarcom's wireless broadband service in Lebanon December 2006; Cedarcom's Chairman and CEO Imad Tarabay and members of iBurst worldwide have signed MoU to cooperate in providing international subscriber roaming access between operating countries at the 5th iBurst International Forum on 12 April 2007, Westin Hotel, Kuala Lumpur, Malaysia.

Mr. Kevin Leong, Group CEO of MoBif Berhad said "the purpose of this MoU is to establish an International Subscriber



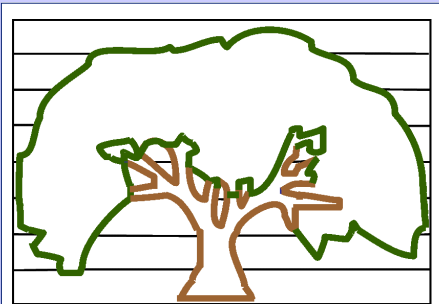


# iBurst Application example



***Initial High-Velocity Tests of iBurst Aboard TGV Trains: An Overview***

**Presentation at iBurst Forum  
Johannesburg, March 2006**

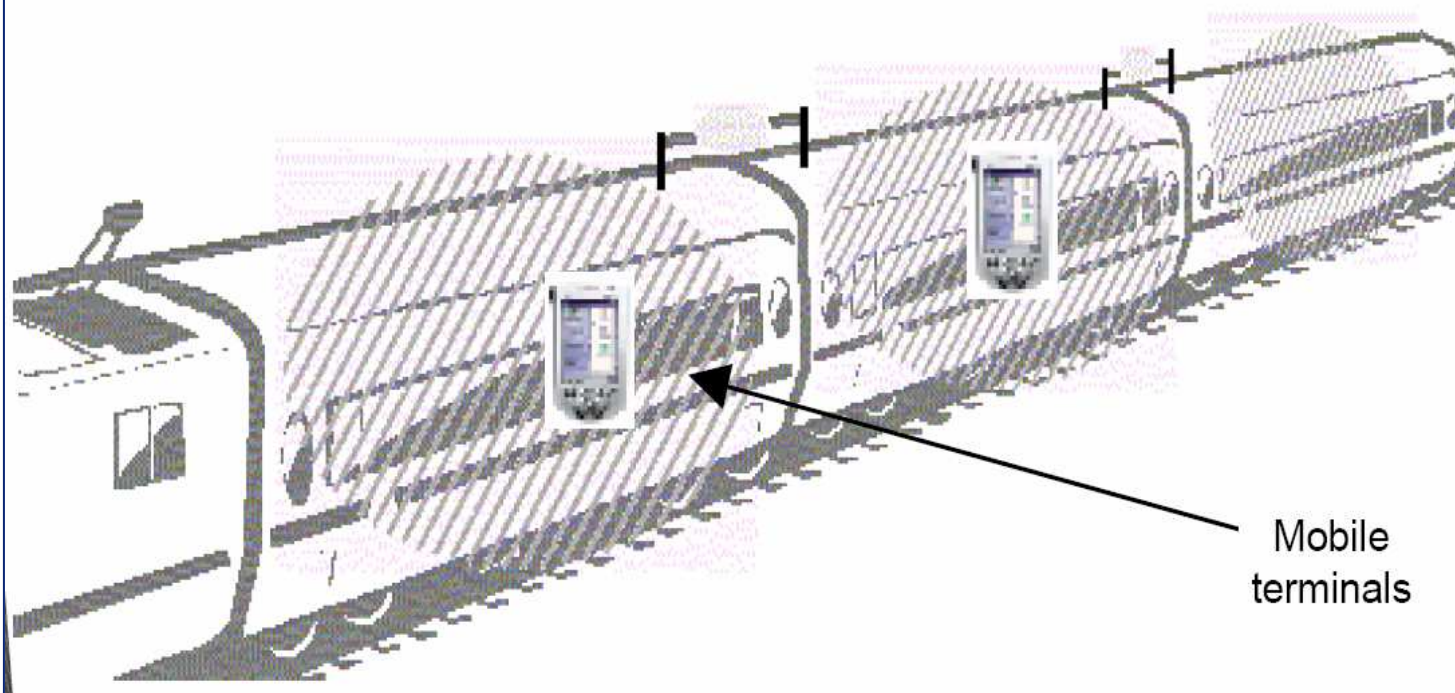


**OAK Global**

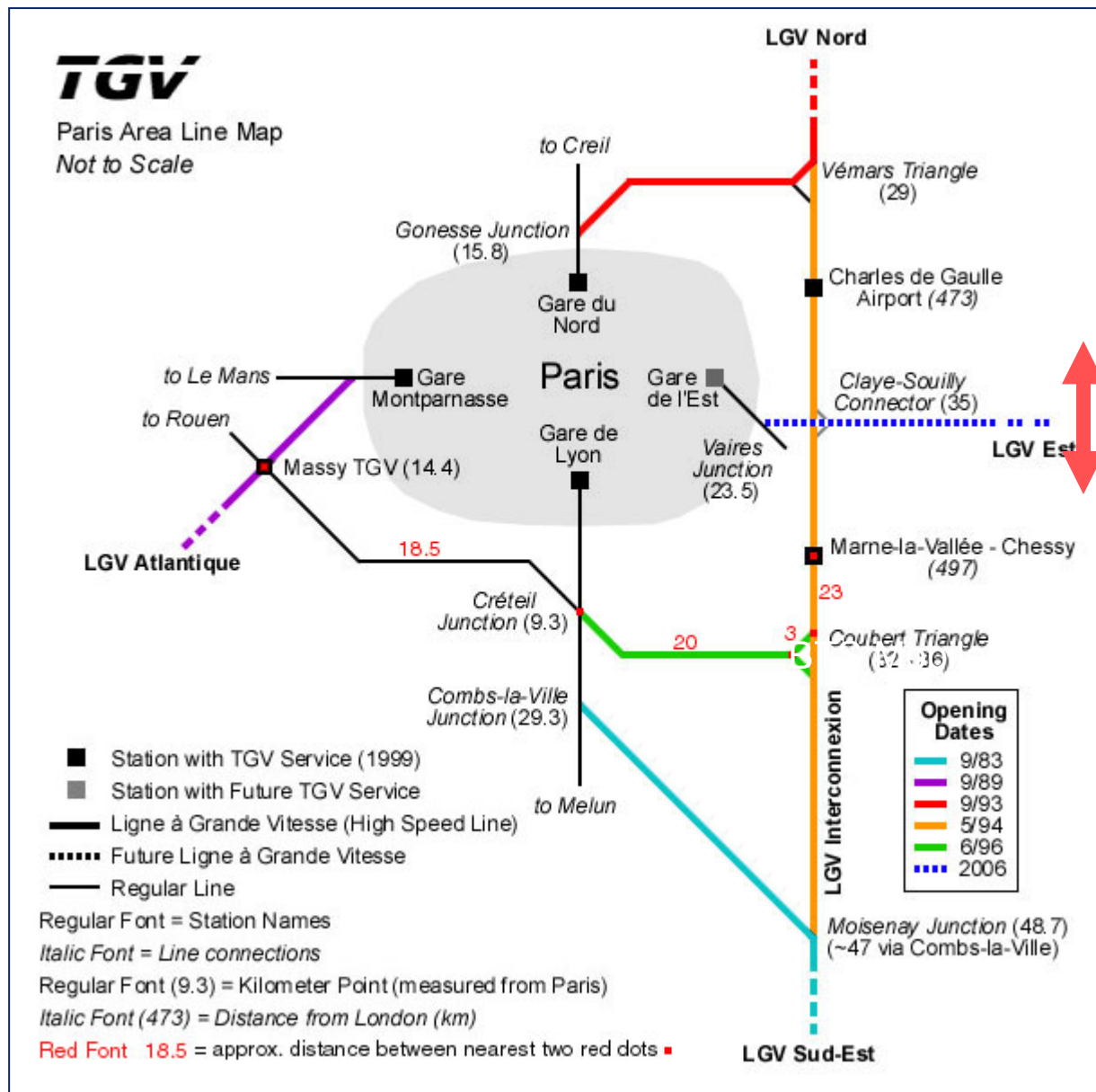


# High Speed Access on TGV: What For?

**WLAN TRAIN project** : WiFi architecture for service delivery on board



# Tests Location and Time Constraints



- 15 Km tracks span in cell
- TGV cruising at 270 Km/h
- Data traffic duration <3 minutes!
- Tests done over 8 days in December and January
- More than 6,000 km traveled

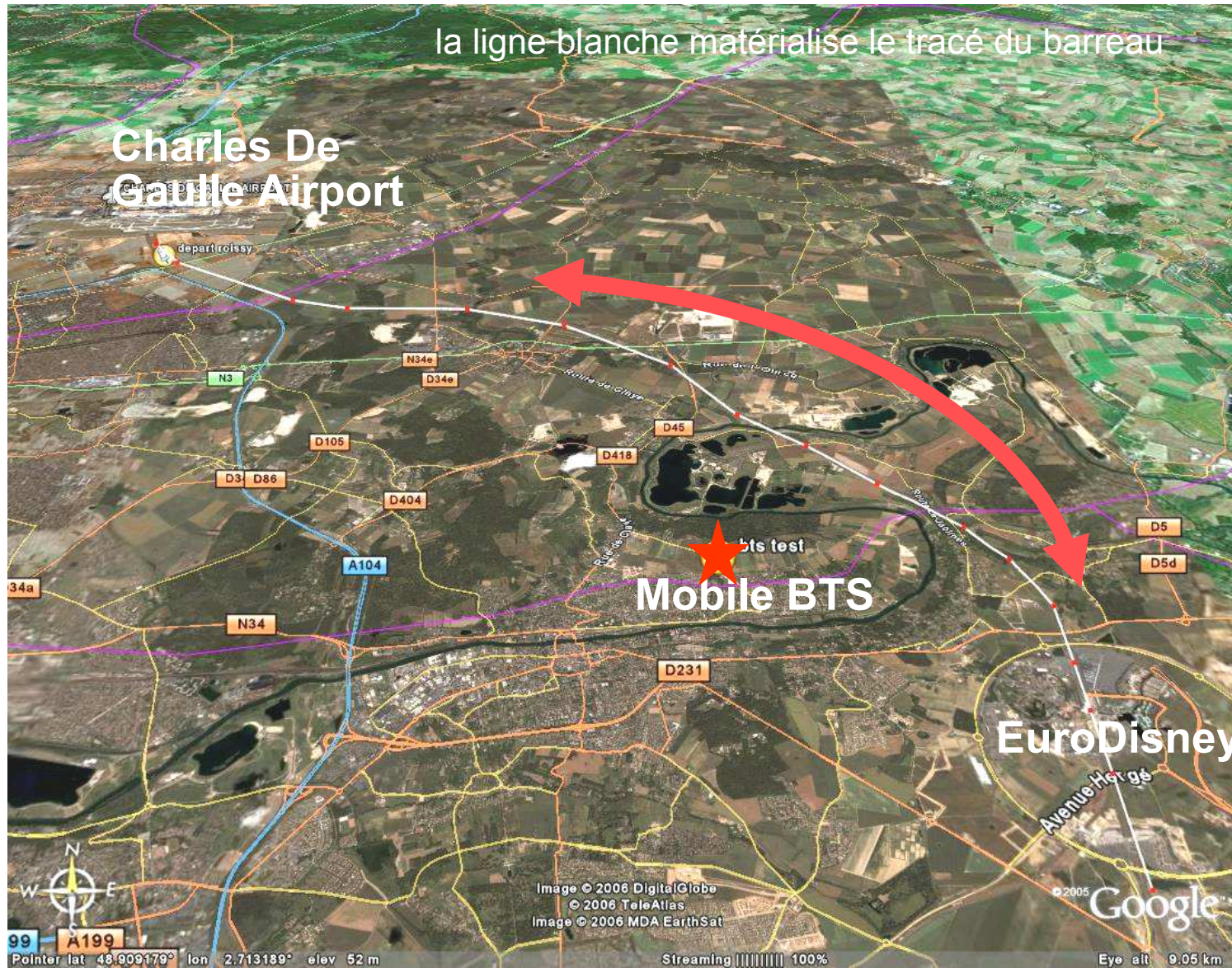


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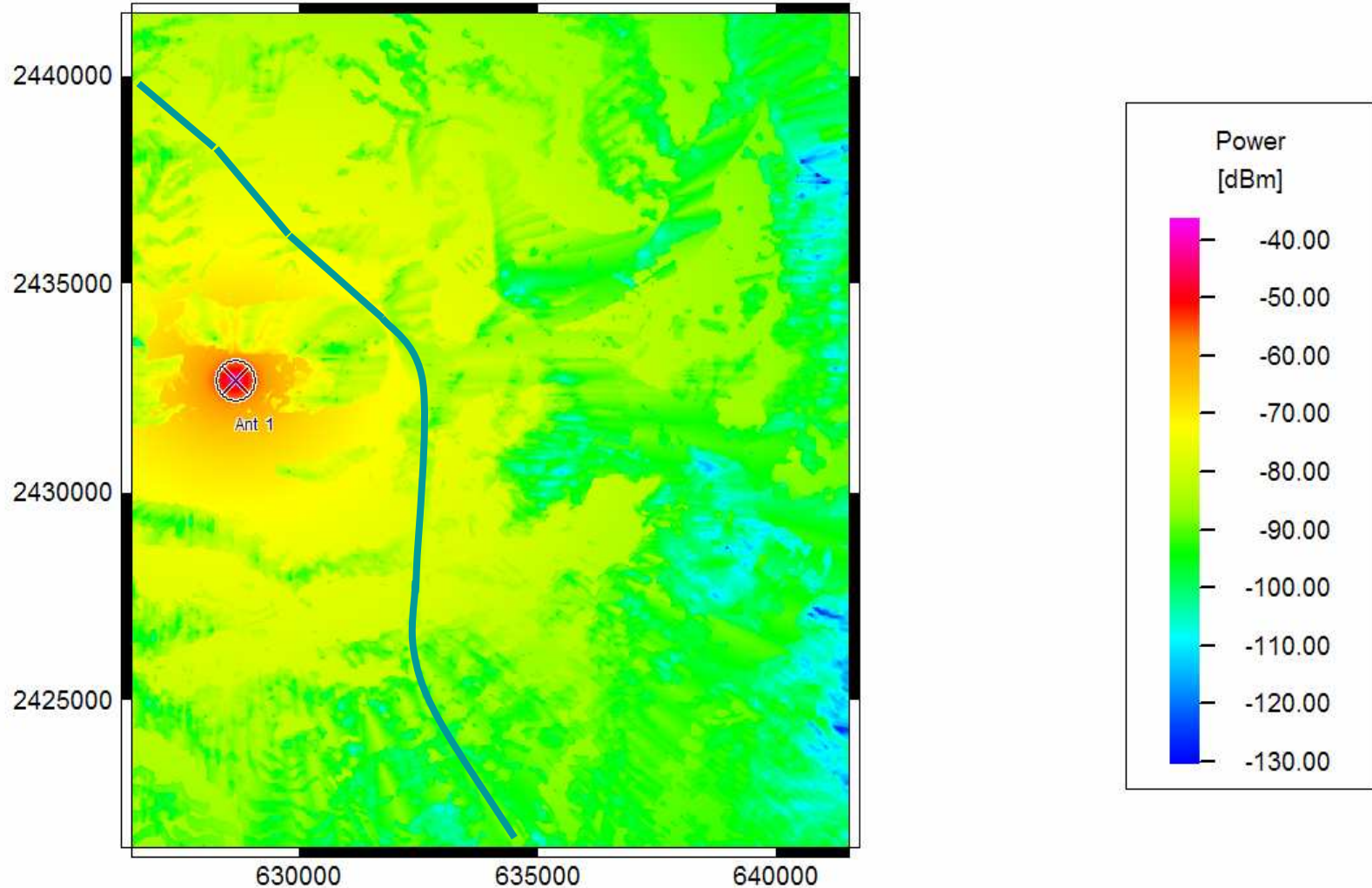


# The Test Environment: High-Speed Link East of Paris





# Radio Propagation Analysis



Power Levels include a 20 dB Clutter Margin



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# The Mobile BTS Setup



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# The Radio Environment

## A Very Tough Environment



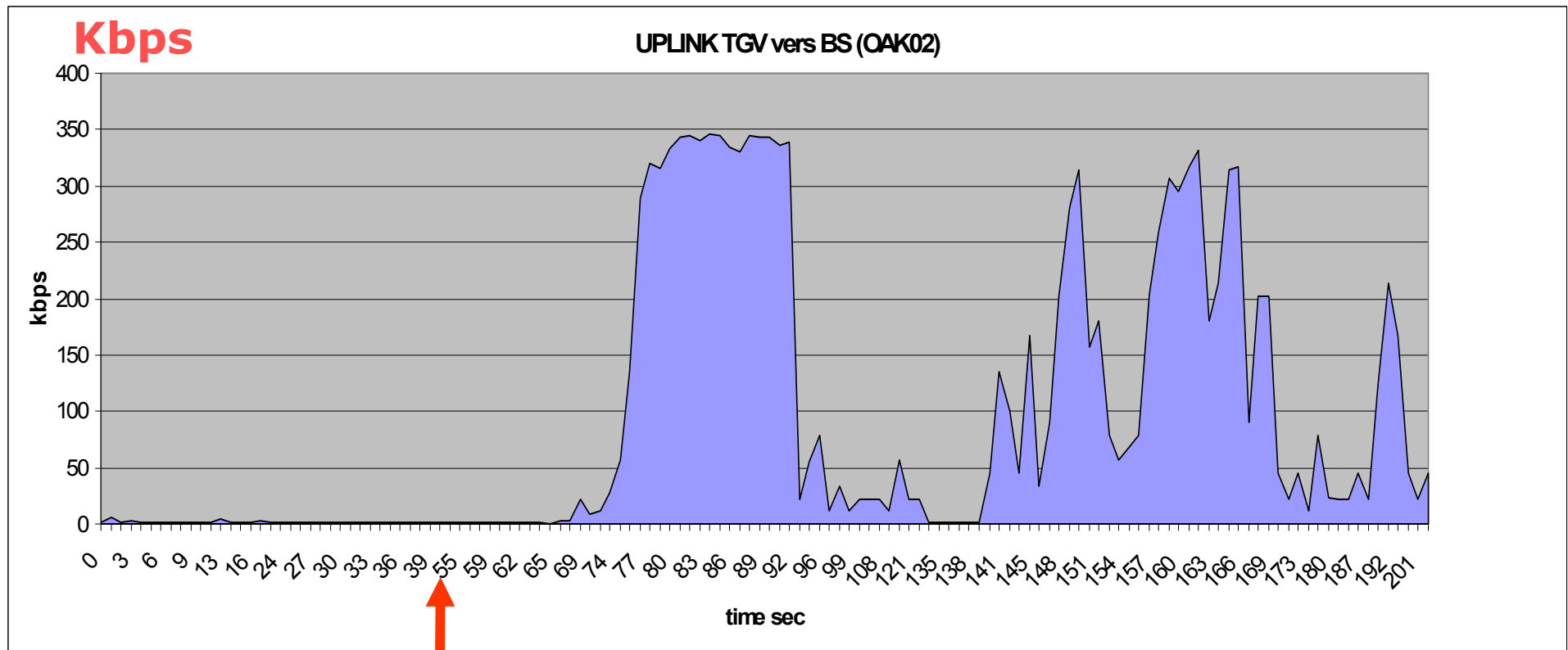
Many Track Segments  
in Trenches

3G Antenna

# An Alternative Terminal Setup



# Uplink Traffic Throughput



**BEGIN Link Setup**

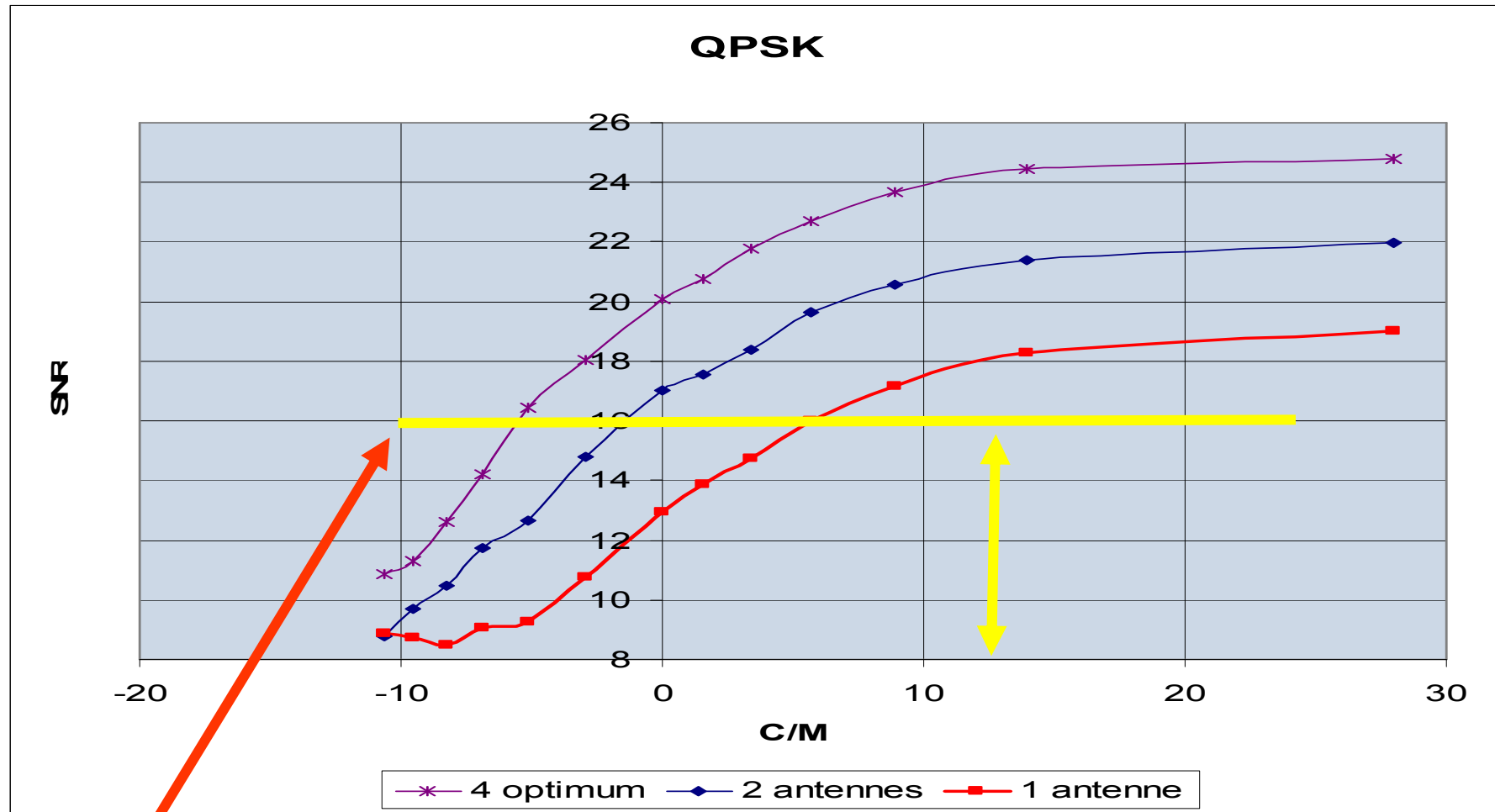


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# DL performance (Link Budget & C/M) vs. multi-antenna UT <sub>38</sub>



**SNR threshold required for maximum DL throughput EIRP is the same in each case**

# Thank you

