THE NEW VALUE FRONTIER



# Introduction of iBurst System









#### **Corporate Summary**

#### **★**Corporate Summary (As of March, 2007)

: April 1, 1959 **Established** 

President : Makoto Kawamura

Capital : ¥115,703,320,000 (US\$1.00 Billion)

**Employees** : 12,613 (Japan) **Consolidated Subsidiaries: 180 companies Affiliates** 12 companies

**Kyocera Group Employees**: 63,477 (World Wide)

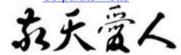


Founder and Chairman Emeritus Makoto Kawamura Kazuo Inamori



President

**Corporate Motto** 



<Consolidated Result as of Mar. 30, 2006>

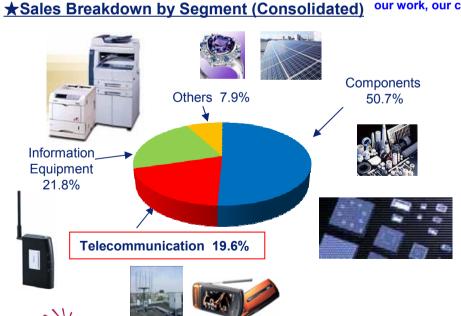
Consolidated Net Sales: ¥1,283, 897 Million (US\$11.1 Billion)

Income Before Income Taxes: ¥106,504 Million (US\$926M)

Net Income: ¥69,696 Million (US\$634 M)

Respect the Divine and Love People."

Preserve the spirit to work fairly and honorably, respecting people. our work, our company and our global community









**Corporate Headquarter** 

**Communication Business** Headquarter

THE NEW VALUE FRONTIER



#### **Telecommunications Business Field**



**PHS** 

**iBurst** 



Handset/Terminal Device





Super WLL System SLSU



CDMA 1X EVDO Base Station



Infrastructure





iBurst System





Network







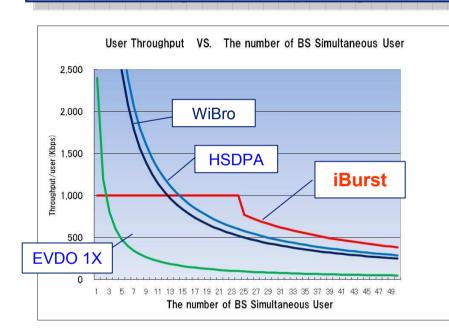






#### **High Data Rate**

iBurst supports Data Rate of 1.061Mbps downlink/ 346Kbps uplink with System capacity 24.4Mbps downlink/ 7.9 Mbps uplink.



iBurst Base Station

1 Mbps

1 Mbps

iBurst gives you high speed internet & email access!

1 Mbps downlink for up to 24 Concurrent Users





# **Comparison with other Systems**

System	Bandwidth Used	Maximum Throughput (downlink)	Spectral Efficiency (bit/s/Hz)	
			Maximum	Average
CDMA 2000 1X EVDO Rev.0	1.25MHz	2.4Mbps	1.92	0.64
CDMA 2000 1X EVDO Rev.A	1.25MHz	3.1Mbps	2.48	0.8
W-CDMA	5MHz	2Mbps	0.4	0.2
HSDPA	5MHz	14.4Mbps	2.8	0.6 - 0.8
WiBro	8.75MHz	18.4Mbps	2.1	1.5
iBurst	5MHz	24.4Mbps	6.4	3.4

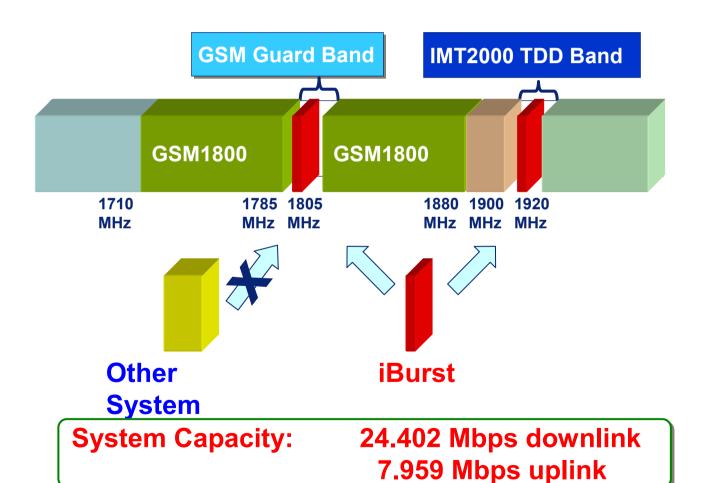




#### **Operability on narrow frequency band**

☐ Advantage of Providing Service with 5MHz

⇒ Easy to procure spectrum







THE NEW VALUE FRONTIER



# Market Development of iBurst







### iBurst Worldwide Deployment

iBurst is in Commercial Service in 9 Countries (10 Operators).

Commercial Launch has been decided in 8 other Countries.







#### **Spectrum used for iBurst Service**

# 1.79GHz and 1.90GHz are the bands mainly used for iBurst Service.





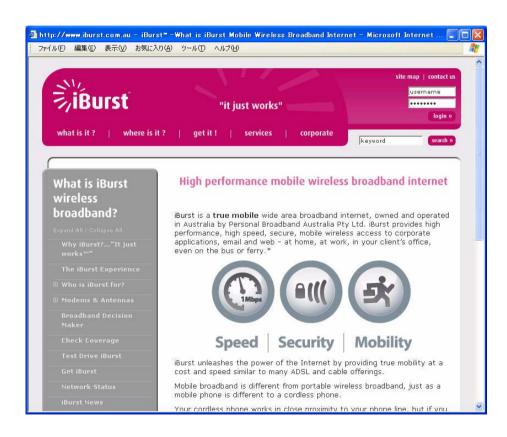


#### iBurst Commercial Service in Australia

**Operator : Personal Broadband Australia Pty Ltd.** 

Service started in March, 2004.

URL: http://www.iburst.com.au













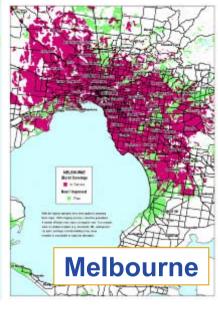


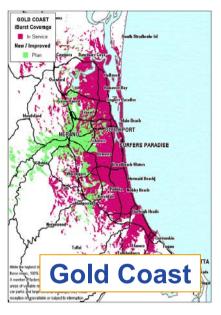
#### **Coverage in Australia**

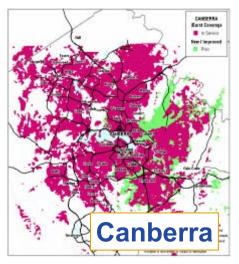


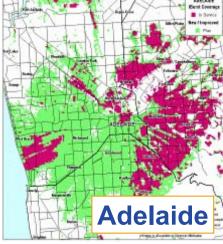
PBA has started iBurst Commercial Service in 7 main cities.

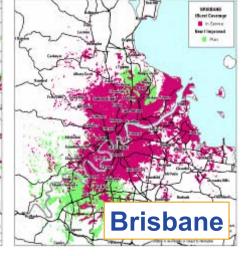


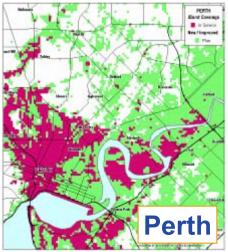
















#### iBurst Commercial Service in South Africa

**Operator: Wireless Business Solutions (Pty) Ltd.** 

Service started in April 2005.

**URL**: http://www.wbsmobile.co.za











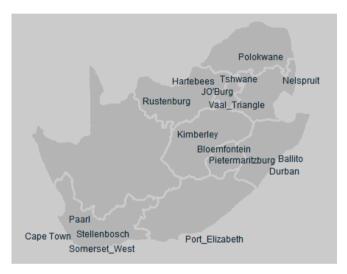






#### iBurst Commercial Service in South Africa

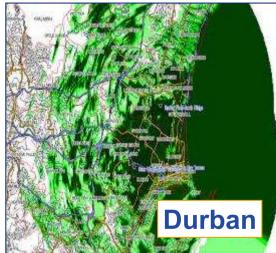
#### WBS operates iBurst Commercial Service in 17 cities in South Africa.













#### **Business Expansion by WBS**

 iBurst Global, a WBS Group company, is expanding iBurst operation to other African Countries.



Ghana

Operator : iBurst Ghana Pty Ltd.

**Service started in August 2006** 

URL : http://www.iburstghana.com/

Other Countries

Nigeria, DR Congo, Algeria, Mozambique

Vodacom invests in WBS and starts offering iBurst.









#### iBurst Commercial Service in Africa

Kenya, Ghana, and Tanzania

**Operator : Africa Online Ltd.** 

Service started in Kenya in February 2006

in Ghana in October 2006

Service will start in Tanzania in July 2007

**URL**: http://www.africaonline.com

In February 2007 Telkom SA acquired Africa Online from Africa Lakes Corporation.





Tomorrow's Technology







**Operator: Datacell Azerbaijan-British LLC** 

iBurst Commercial Service in Azerbaijan

Service started in December 2005.

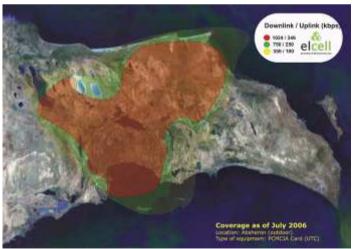
**URL**: http://www.elcell.az





Datacell started "elcell" iBurst Commercial Service in Baku, the capital city of Azerbaijan.









KYOCER<del>a</del>

THE NEW VALUE FRONTIER

# **Sales Promotion by Datacell**















#### 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.











#### **New Operators of iBurst Commercial Service**

**♦** Canada



**Operator: Yamatech Group Inc.** 

Service started in October 2006.

**URL**: http://redballinternet.ca/









**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







#### Other Commercial Networks to be deployed

**♦**Tanzania Africa on Line

**Commercial Service started in July 2007** 

◆ <u>Cyprus</u> 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,

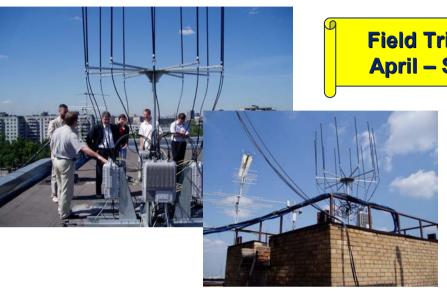
Ireland, Northern Ireland, More operators in the U.S.,

Many Operators are expanding their operation to other countries.





#### What's happening in Russia?



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





O xone axmomentae percessas ("KPU or 19.12.2005 № 05-11-05-078

предприктия «Научно-испедерантельский институт радио» (ФГУП НИИР)
об использования полосы радиочнотот 1783-1805 МГц радиослектринными
средствами (РЭС) беспромедного доступь, Государственная комиссам до

уделичестими отминент
В соотпеститем отминент
В соотп

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

October 23, 2006

#### **State Radio Frequency Commission RESOLVES:**

To recognize as feasible the use of the band 1787.5-1802.5 MHz by wireless access equipment. деления в приножения в высъемсения решениями го изыкожання « Поручить о ГУТИ НОИВ проделжить исследования по изыкожання очистотного синктра в динивкове до 5 ГТ и и разработко условий его нестигот использования дат развития беспроподного доступа на итория Российской Фенјезария.



THE NEW VALUE FRONTIER

#### What's happening in Russia?



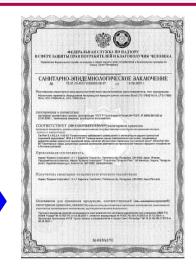
GOST-R for Base Station

& 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





24

#### **♦** Promotion of iBurst by iBurst Forum

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

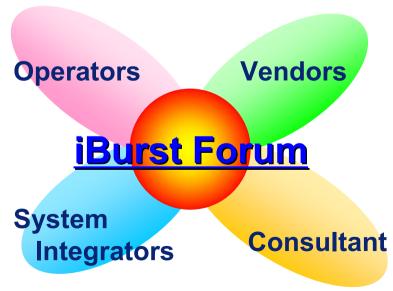
Past Event: April 2004 Sydney, Australia

**December 2004 Singapore** 

June 2005 Yokohama, Japan

March 2006 Johannesburg, South Africa

April 2007 Kuala Lumpur, Malaysia









#### iBurst Forum in Malaysia

#### **♦** 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 4/26/20 07 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 in providing international subscriber roaming access between operating countries at the 5th iBurst International Forum on 12 April 2007, Westin Hotel, Kuala Lumpur, Malaysia.

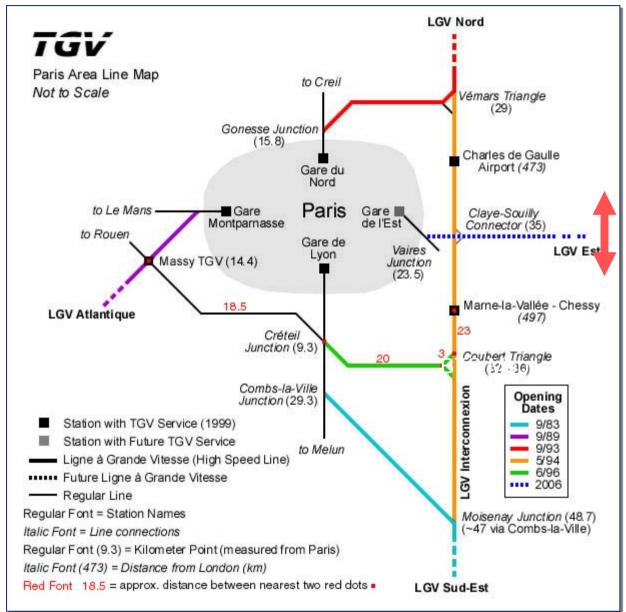
Mr. Kevin Leong, Group CEO of MoBif Berhad said "the purpose of this MoU is to establish an International Subscriber







#### **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 HENEW VALUE FRONTIER



# **An Alternative Terminal Setup**









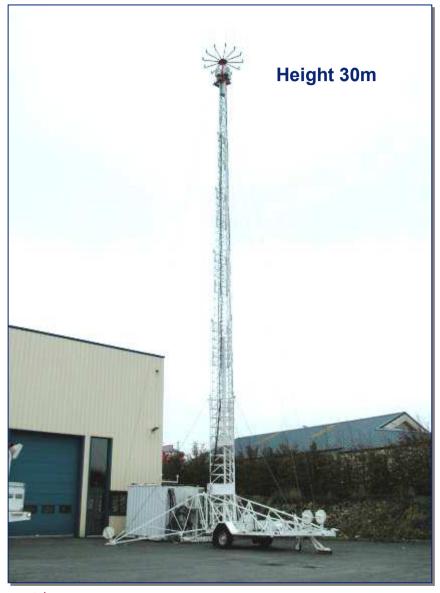
#### The Test Environment: High-Speed Link East of Paris

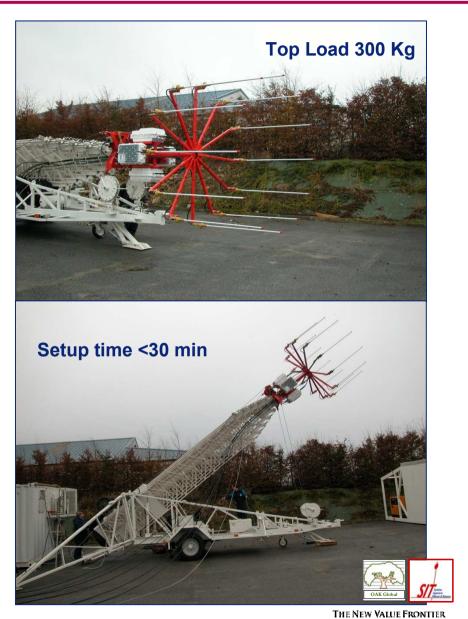






## **The Mobile BTS Setup**









# A Very Tough Environment



Many Track Segments in Trenches

**3G Antenna** 











# Thank you





THE NEW VALUE FRONTIER





