

# **Towards Network No.1 in Smartphone Era**

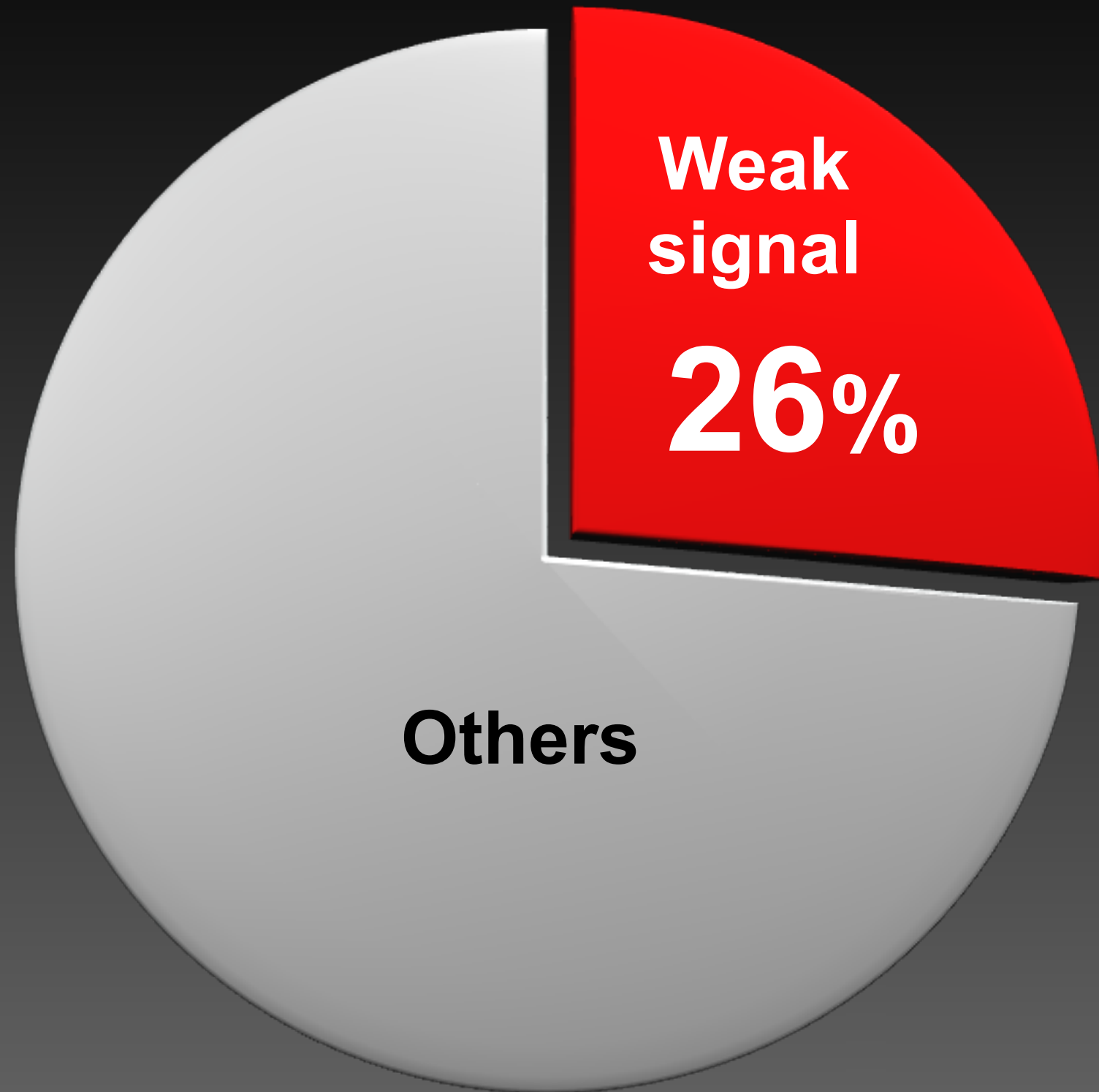
**March 21, 2013**

**Masayoshi Son**

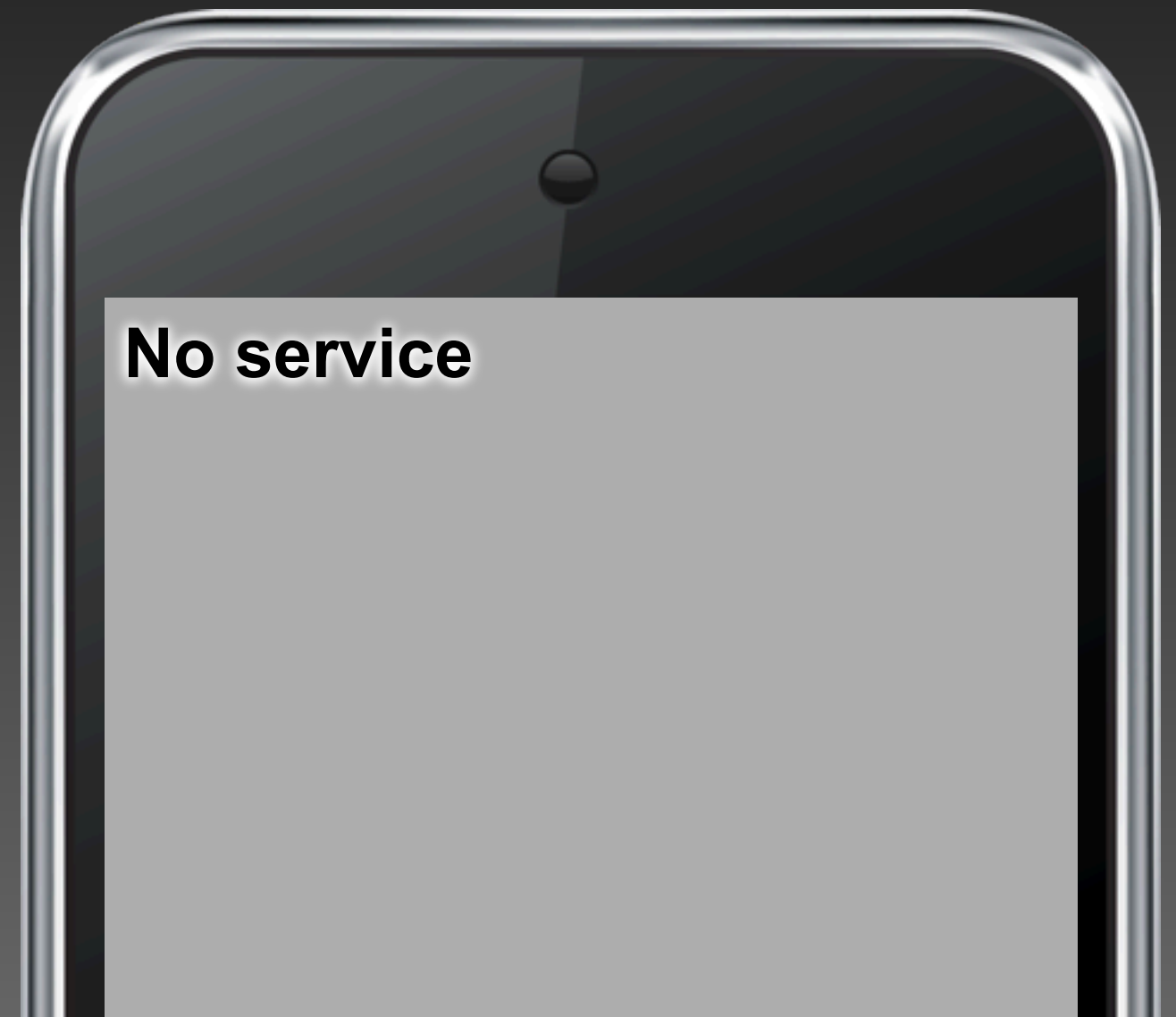
**Representative of the SoftBank Group**

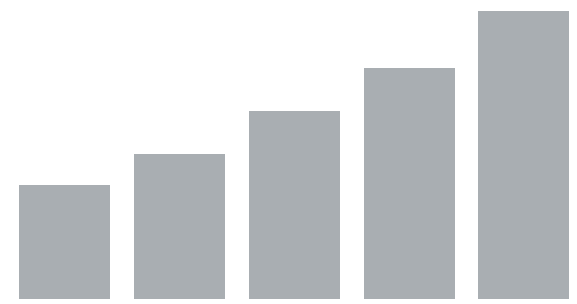
**SoftBank's connectivity  
is weak**

Reasons for Churn  
(March 2010)



**Biggest  
weakness**



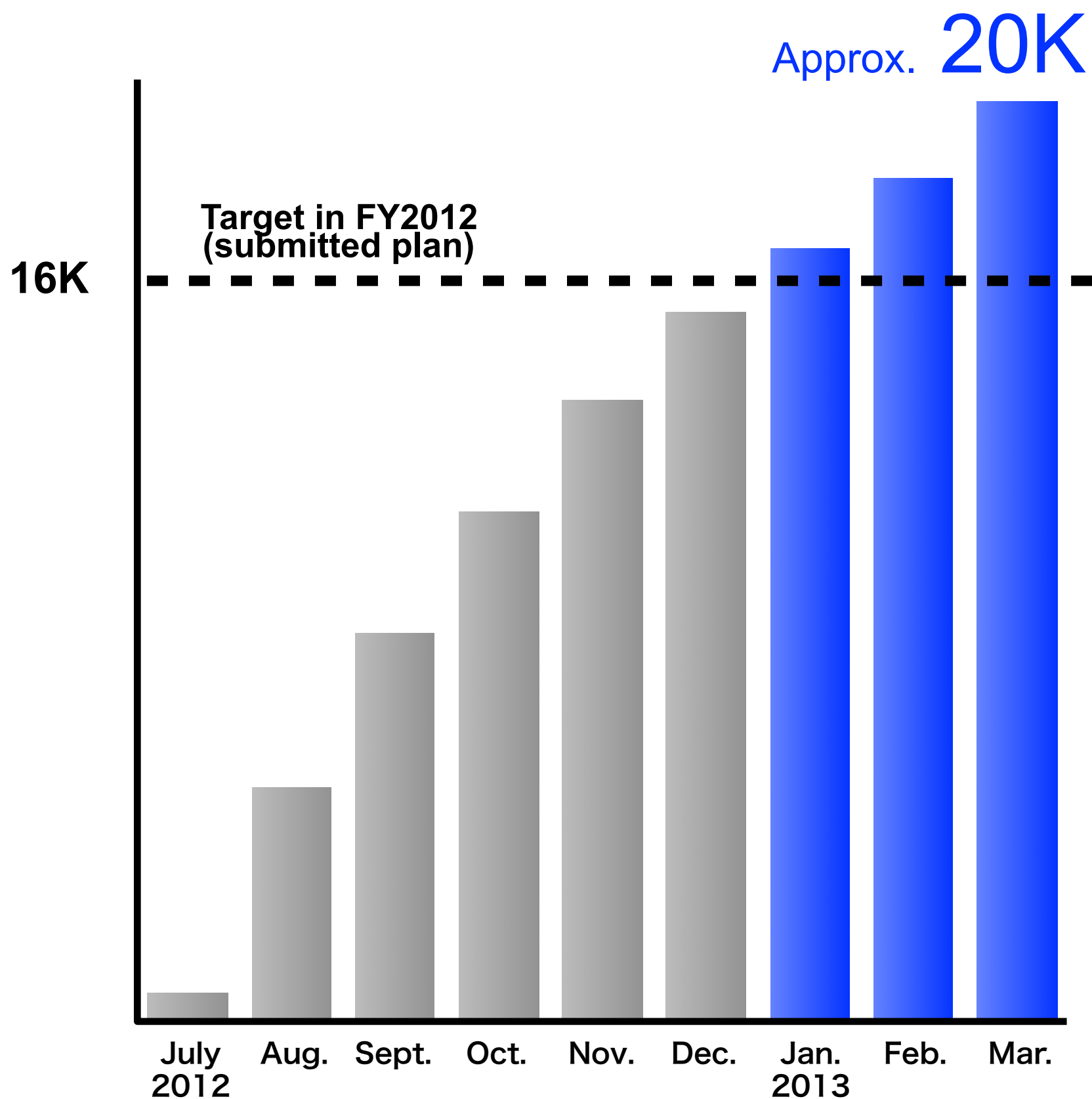


# Platinum Band

Launched on July 25, 2012



# Platinum Band Base Stations



## Exceeded & achieved ahead of schedule



# Even in heavy snow...

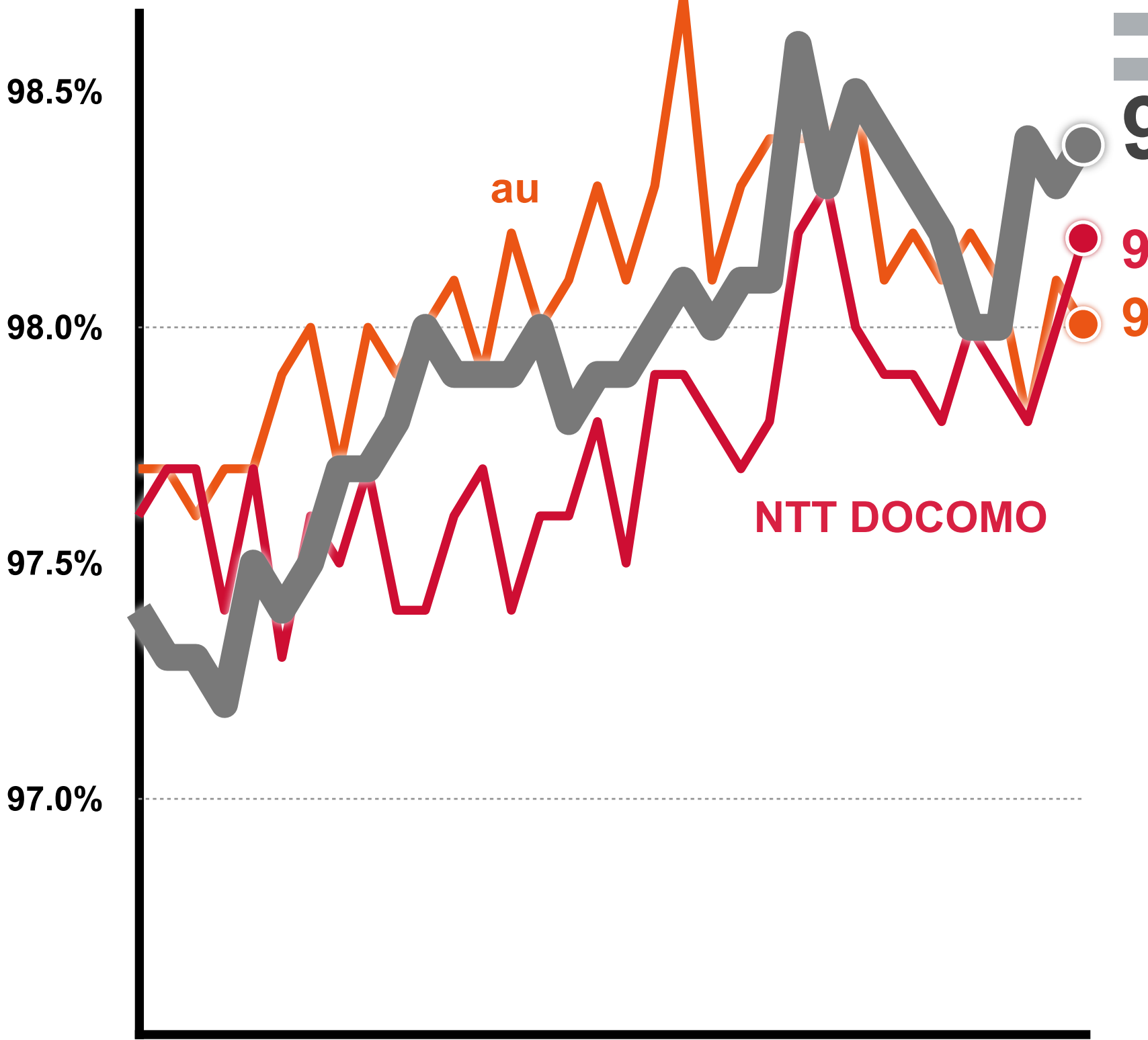


## Installed base stations as planned

**Installation work**

**As a result:**

# Smartphone Call Connection Rate (Japan)



**No.1**  
call connection rate



2012/7/24

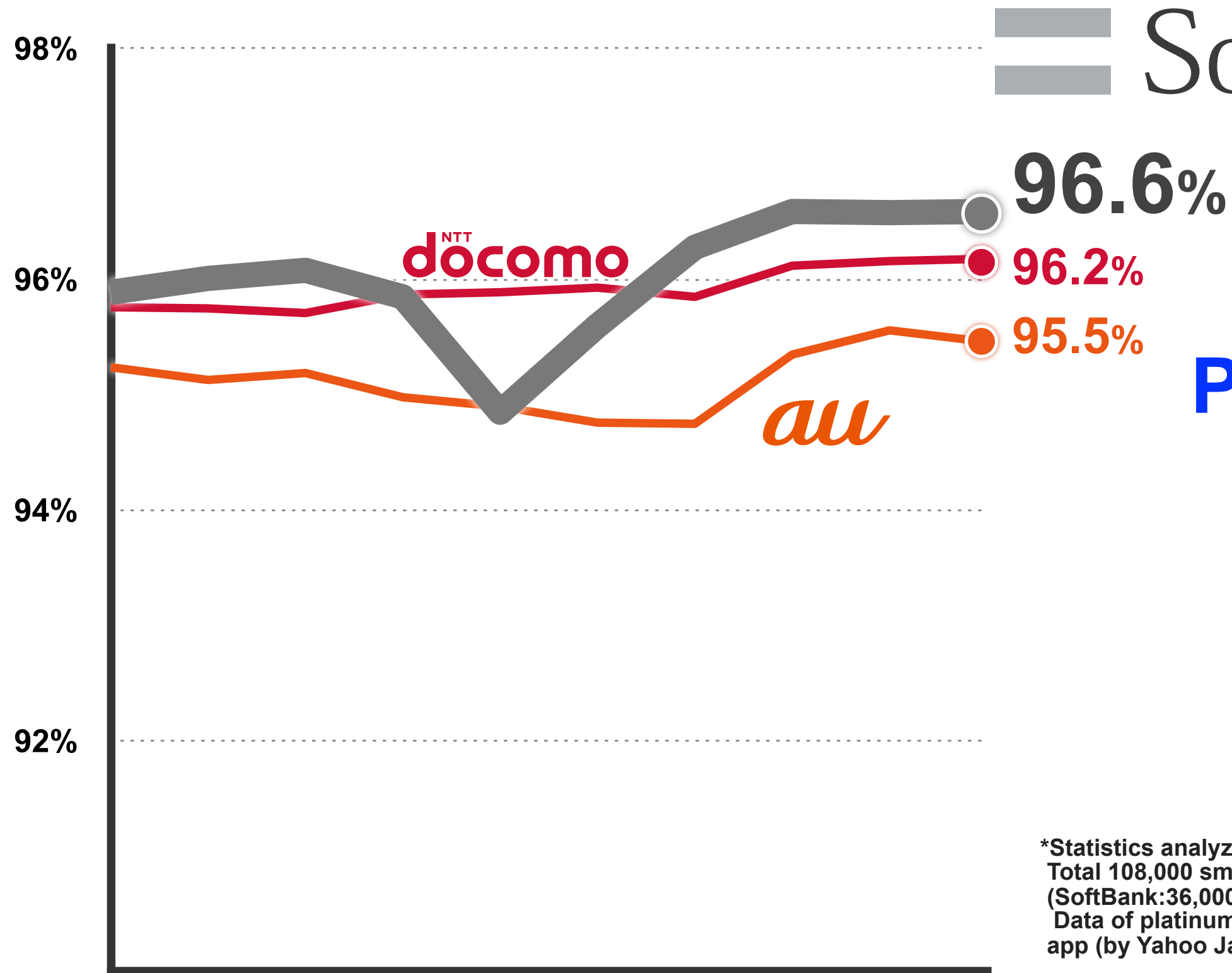
2013/3/12

\*Surveyed by IPSOS. Actual connection rate on calls made to 12,400 smartphone users.  
(SoftBank: 5,300 users, NTT DOCOMO: 3,400 users, au: 3,700 users)



# Packet Connection Rate

(Platinum band-compatible smartphones, Japan)



SoftBank

**No.1**  
**Packet Connection Rate**



\*Statistics analyzed by Agoop Corp.  
 Total 108,000 smartphones were randomly selected for analysis  
 (SoftBank:36,000, NTT DOCOMO: 36,000, au:36,000) from January 15 to March 19.  
 Data of platinum band compatible smartphones was collected through the disaster warning app (by Yahoo Japan) and Ramen Checker app (by Agoop)

**Are we No.1  
just by chance?**



To provide  
greater connectivity  
in smartphone era



**Need to be No.1  
in packet connectivity rate**



**Before the smartphone era**

**Call- and  
text-centric**

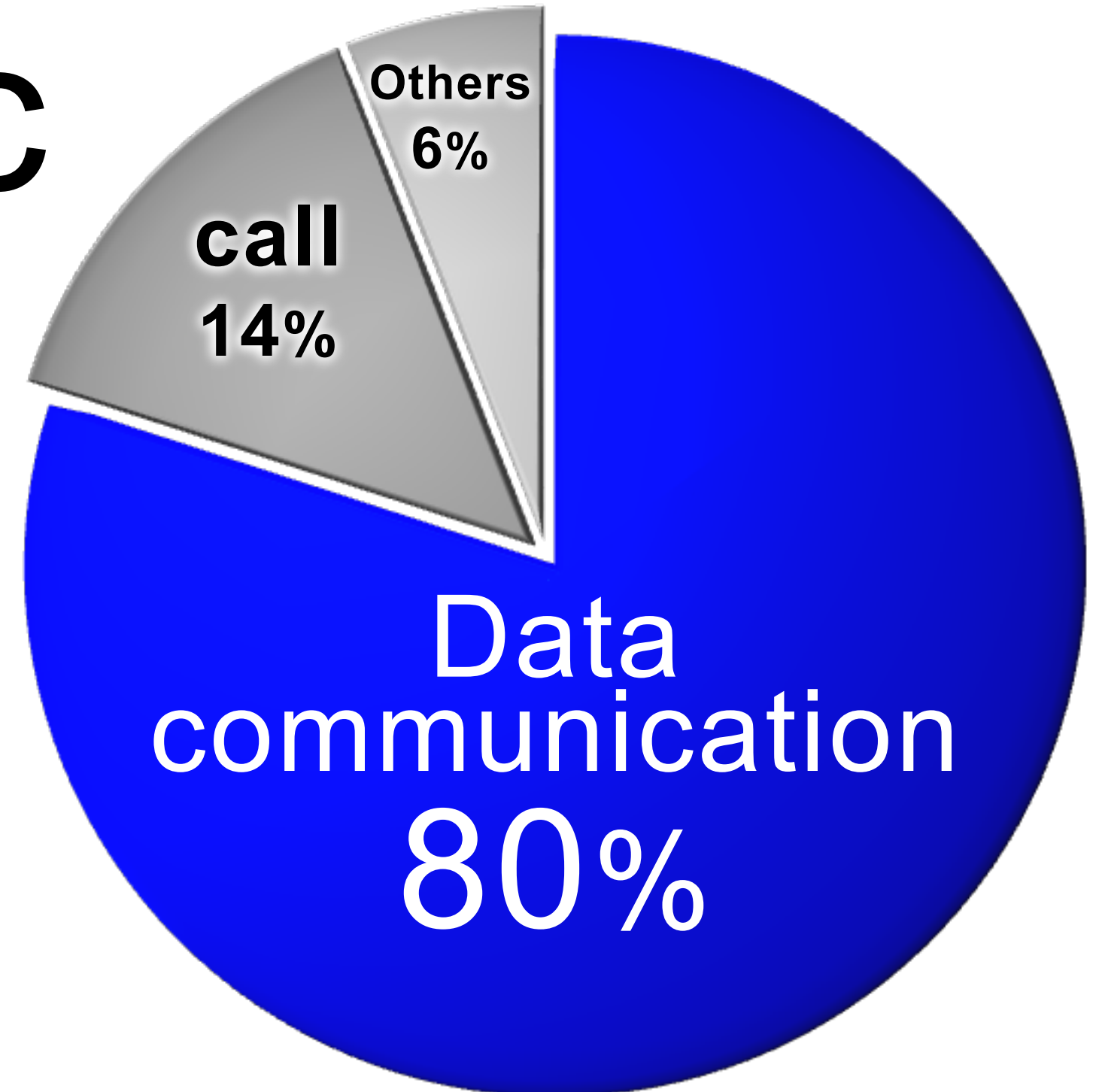


# Today

# Data-centric

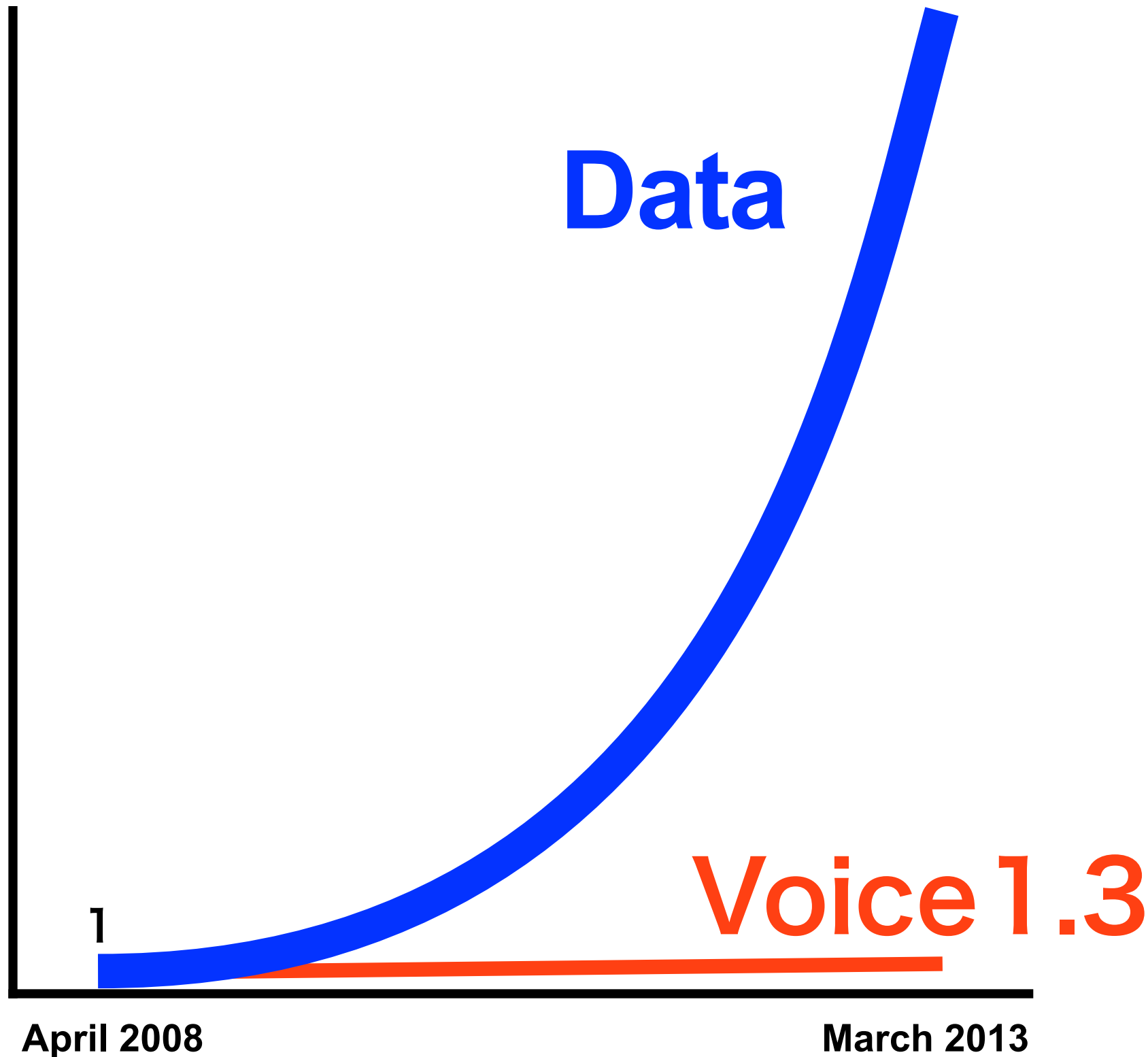


Time Spent on Smartphone / Day (2012)



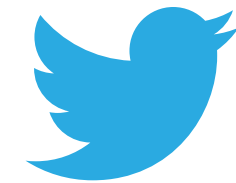
# Mobile Data Traffic

(Indexed at traffic volume of April 2008 = 1)



# 60x in 5 years

facebook



You Tube

LINE

foursquare

USTREAM



EVERNOTE

\*SoftBank data



# Tremendous traffic growth in **big cities**



Osaka

Nagoya

Tokyo



# The Biggest issue in Smartphone Era

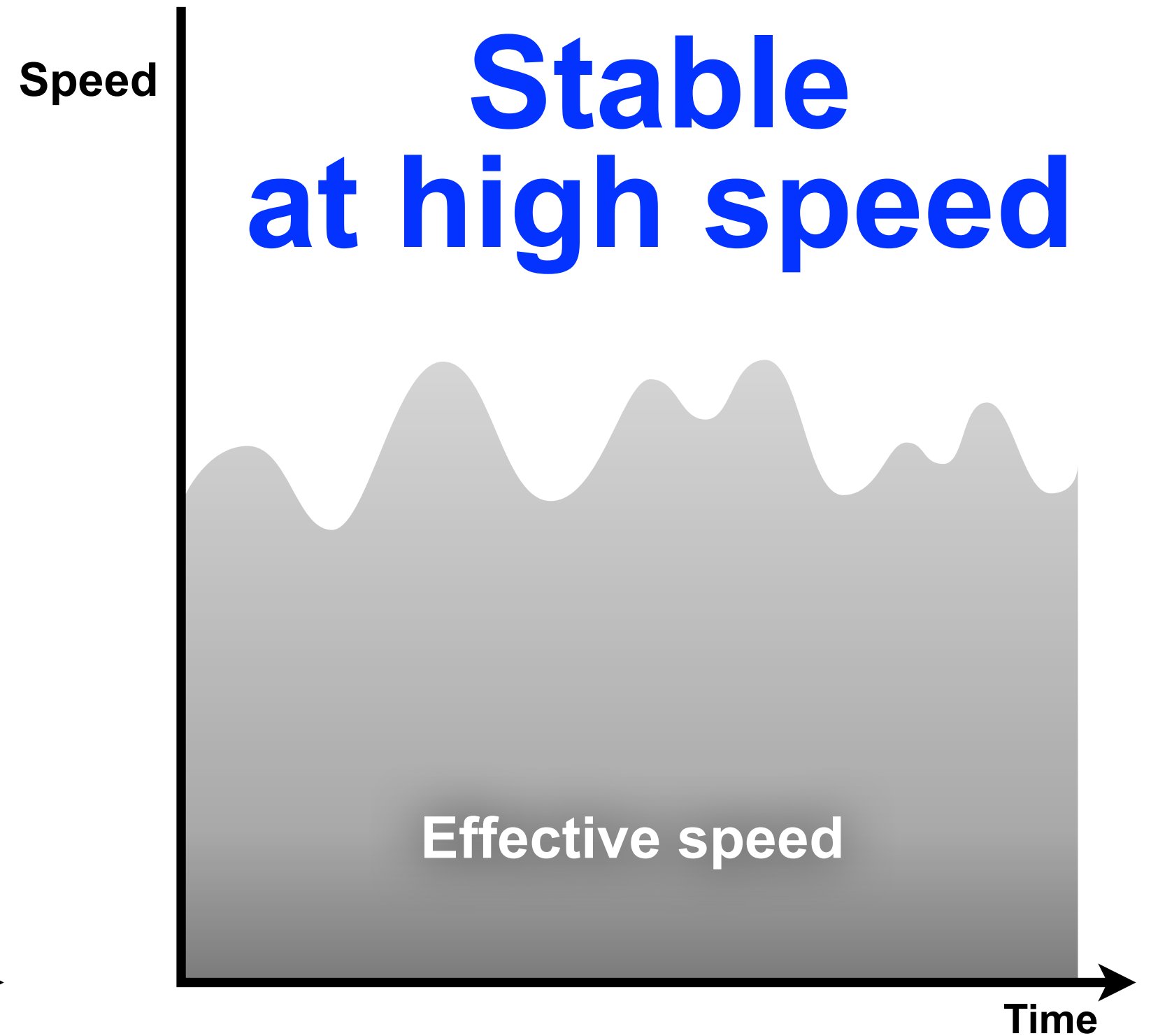
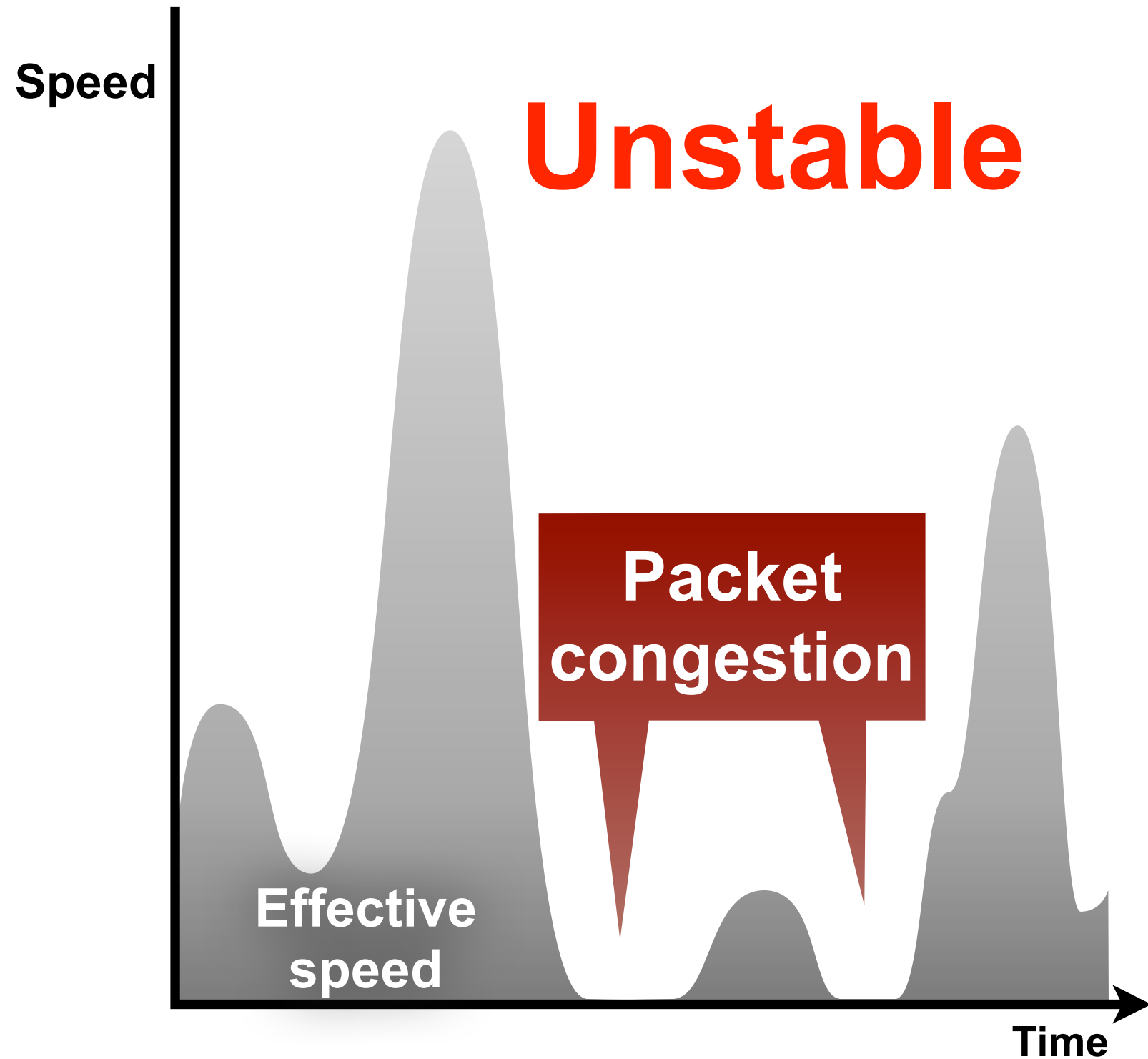
# Packet Congestion

# Packet Congestion

**Good signal reception  
but no data flow**



# Which one do you want to use?

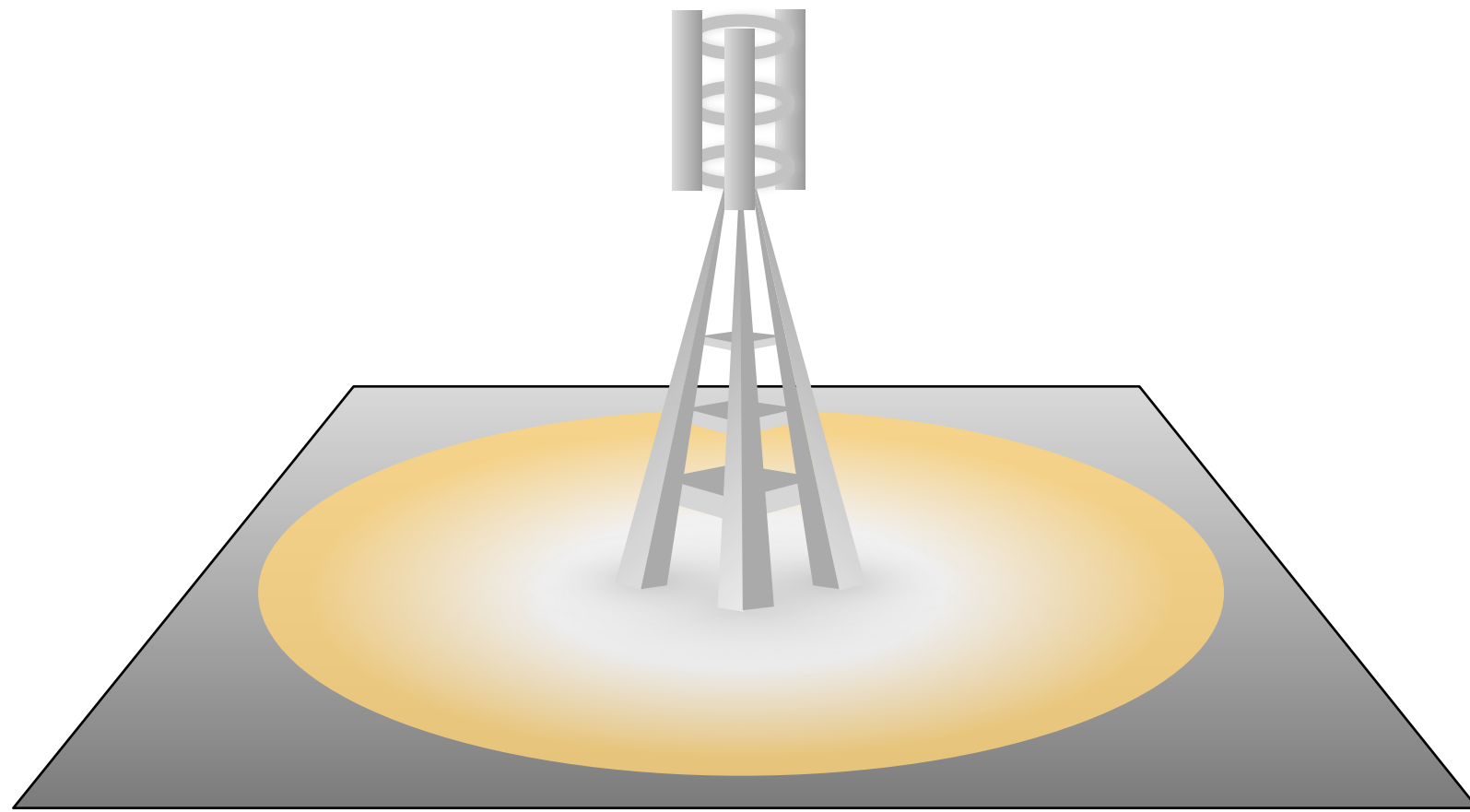




**Effective measures against  
packet congestion**

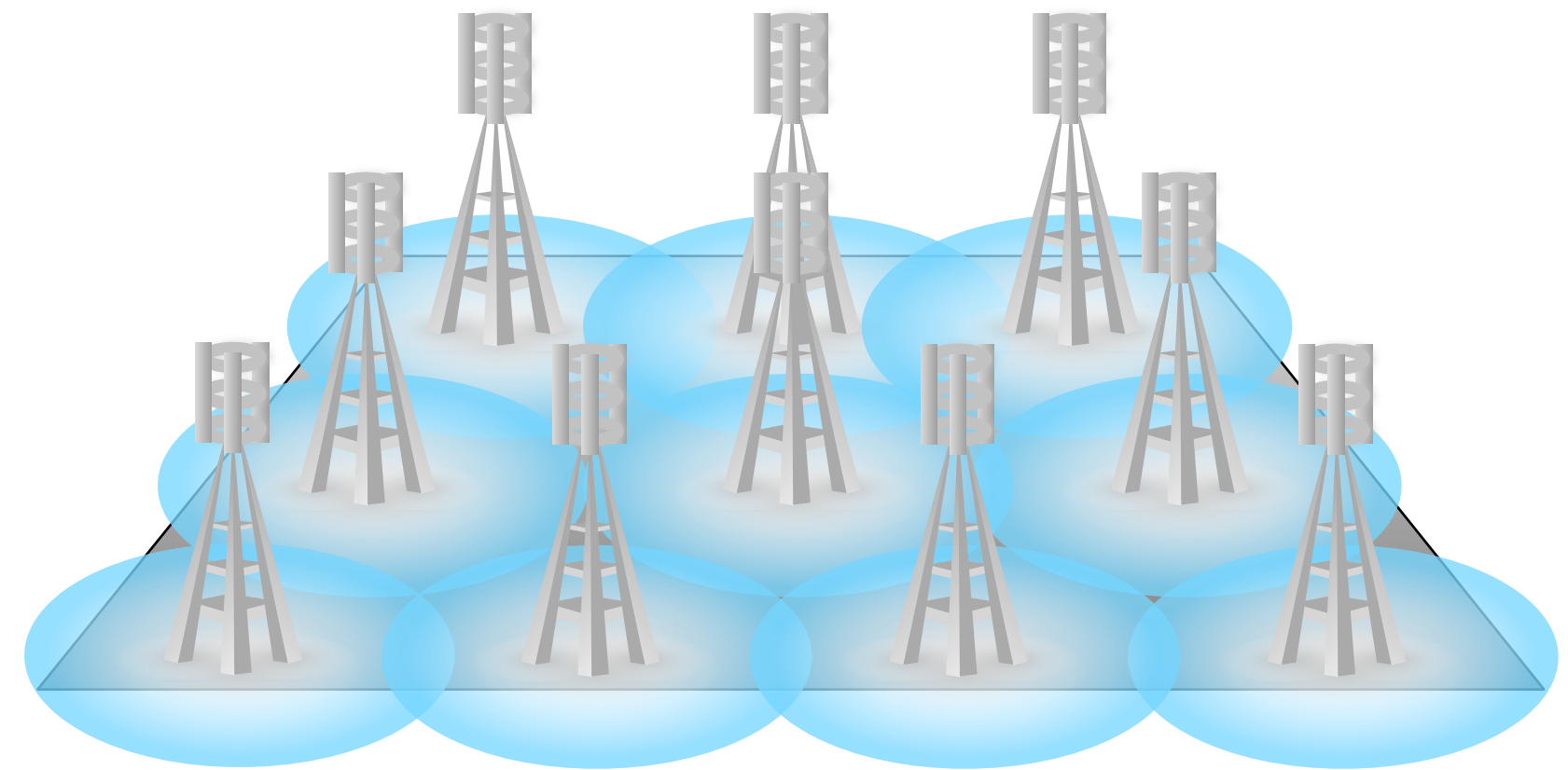
**Small Cells**

# Allocate Traffic to Small Cells



**Regular base station design**

**1,000 users/cell**



**Small cell design**

**100 users/cell**

# Number of Base Stations

(station)

190k = SoftBank



# No.1

in number of base stations



Mar. 2007    Mar. 2008    Mar. 2009    Mar. 2010    Mar. 2011    Mar. 2012

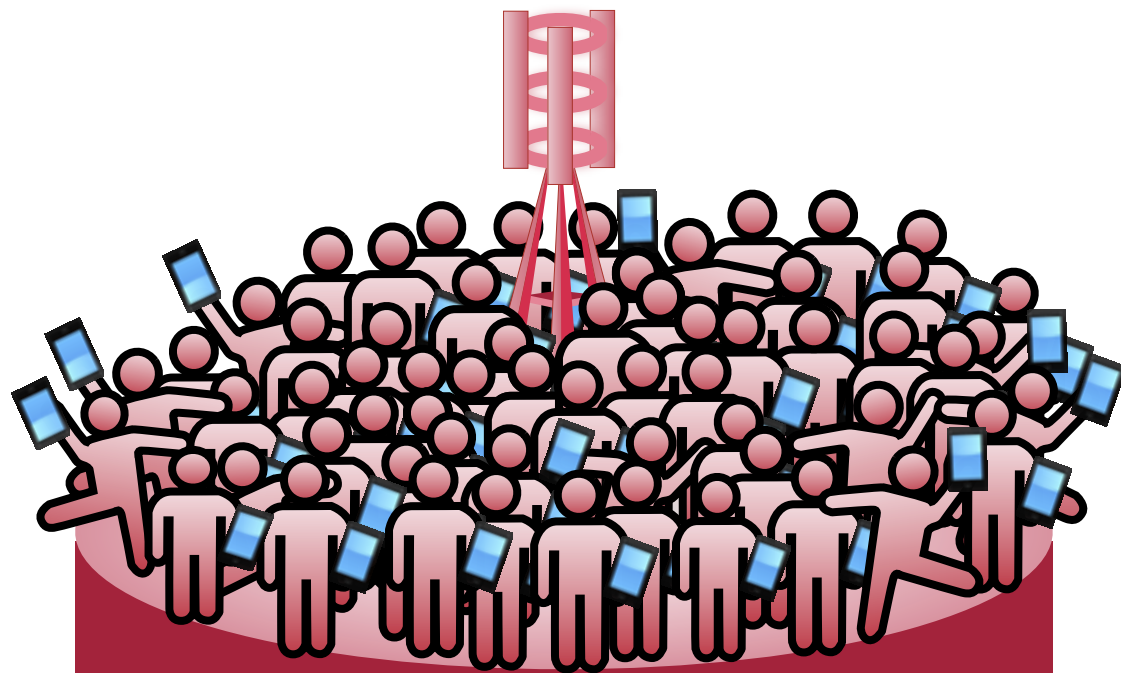
\*Source: Report by Nomura Securities Co., Ltd.(August 29, 2012)  
The sum of the number of indoor and outdoor base stations

# Number of Users per Base Station

(Subscriber number divided by base station number)

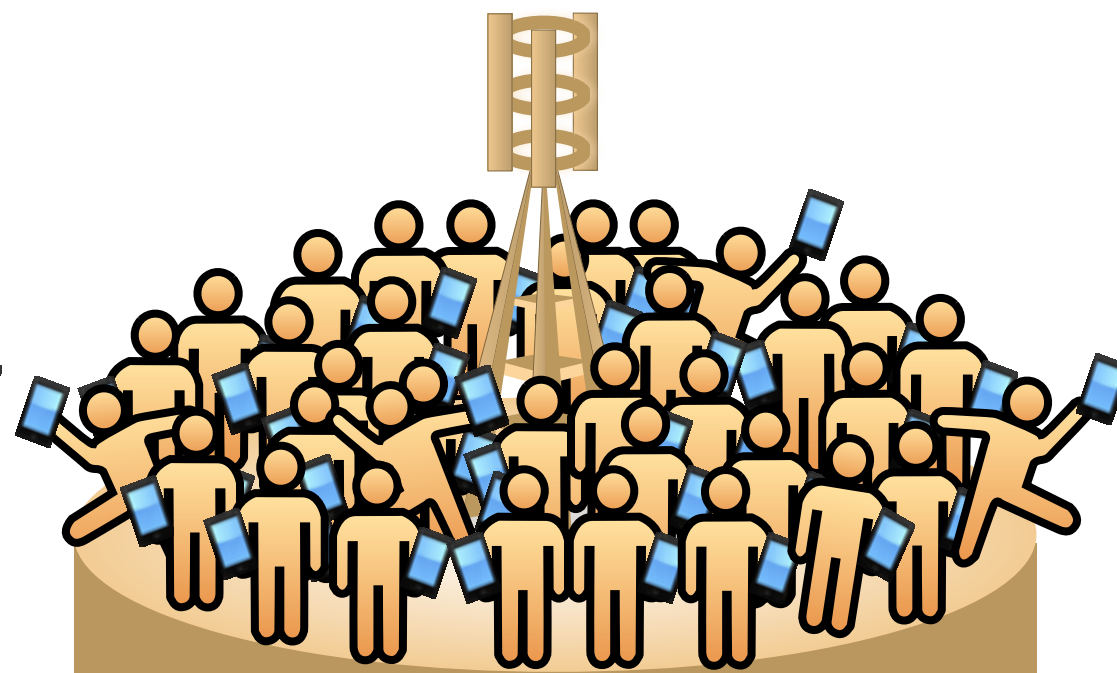
<sup>NTT</sup>**docomo**

600



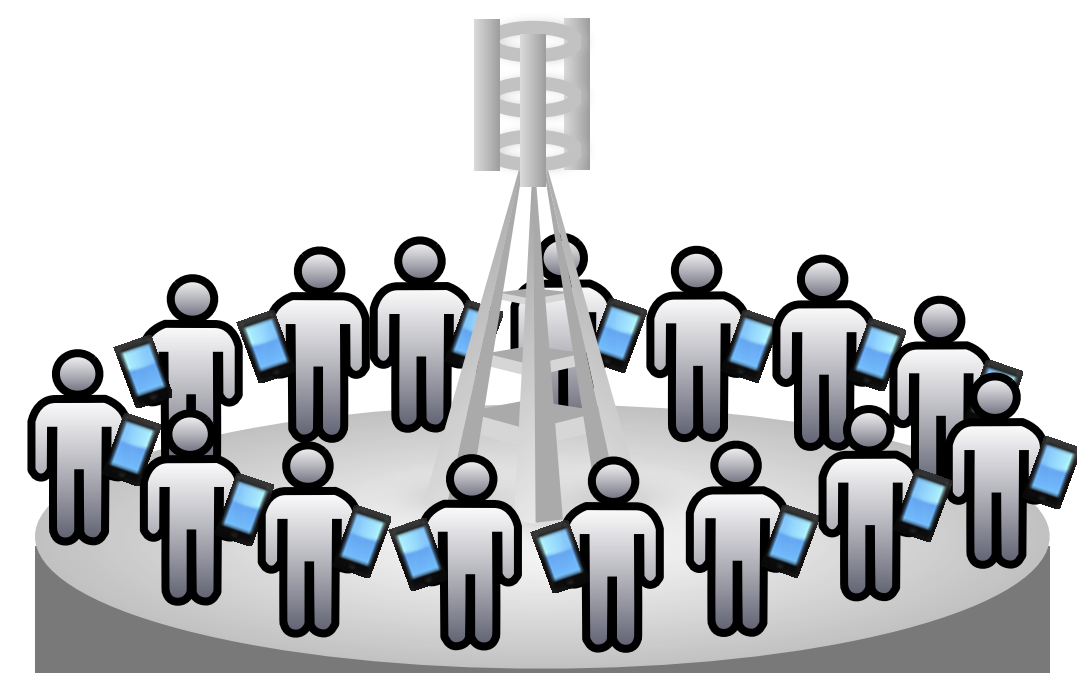
*au*

350



≡ SoftBank

150



\* Created by SoftBank Corp. based on reports by Nomura Securities Co., Ltd. (as of March 2012)

# More Small Cells



**AXGP base stations**  
**25k**



**Public Wi-Fi spots**  
**450k**

# Number of Wi-Fi Access Points (public + households)

(as of March 20, 2013)

Wi-Fiつかえます



SoftBank

Public  
0.45m

Household  
3.4m

3.85m

au

Public  
0.22m

Household  
1.65m

1.87m

NTT  
Docomo

Public  
0.1m

## Overwhelming No.1 in number of Wi-Fi spots

\*Source: au: Earnings results for 3Q FY 2012  
NTT DOCOMO: Corporate website

**Moreover**

# **Double LTE**

**Launched on March 21, 2013**



**Mr. Sachio Semmoto**  
Founder & Chairman  
Emeritus, Director  
eAccess Ltd.





# Utilize 2 Companies' LTE

**2.1**  
GHz

**×**

**1.7**  
GHz

**≡** SoftBank

**EM**  
EMOBILE

# Access to Less Congested Network





# Double LTE for Greater Customer Experience

iPad Retina display model

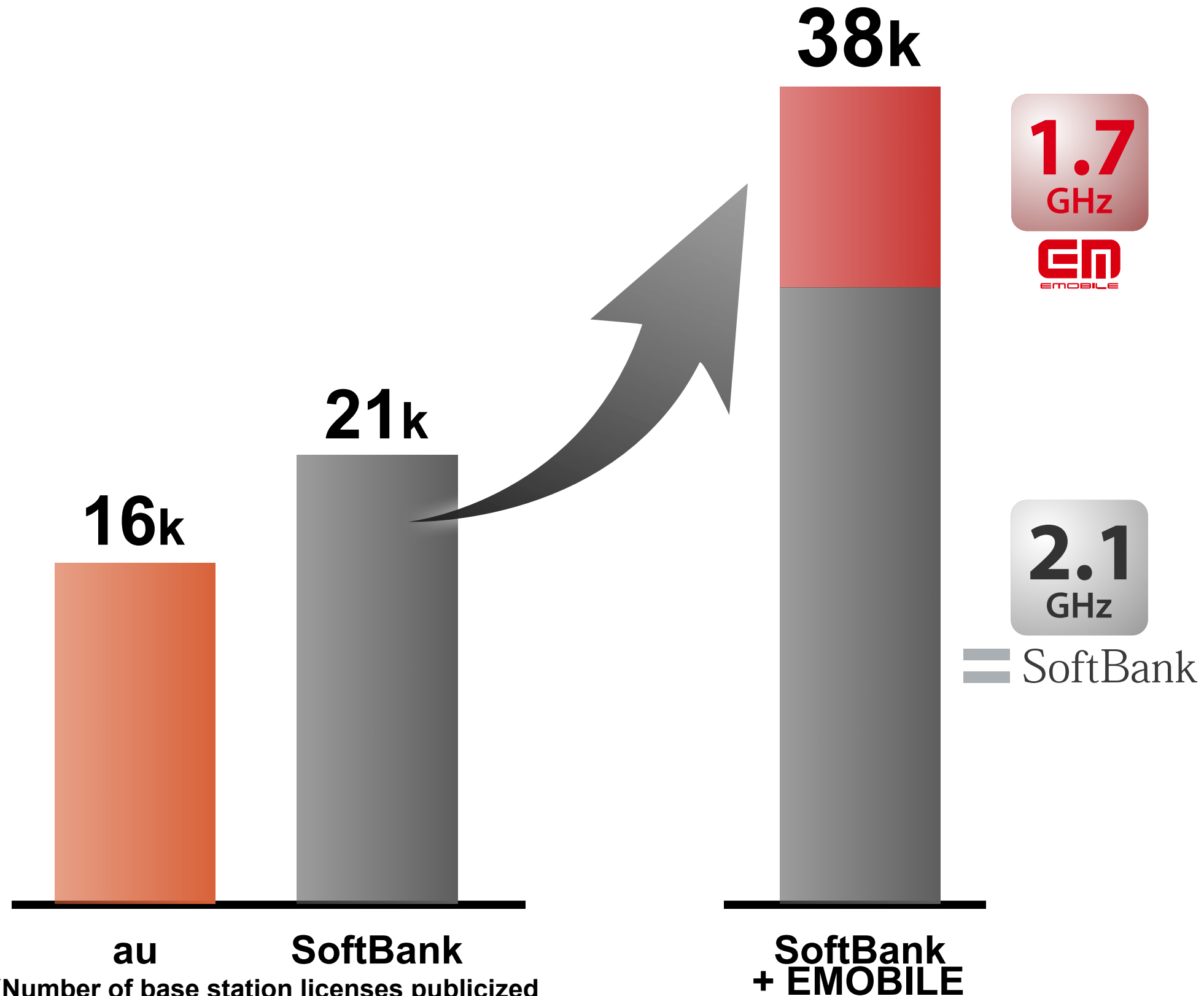
iPhone 5



iPad mini



## 2.1G/1.7GHz LTE Base Stations



(Number of base station licenses publicized by the Ministry of Internal Affairs and Communications in March 2013)

(as of March 2014, internal plan)

Number of LTE base stations compatible with iPhone 5  
**Increase rapidly**



Source: The Ministry of Internal Affairs and Communications (update on March 11, 2013)



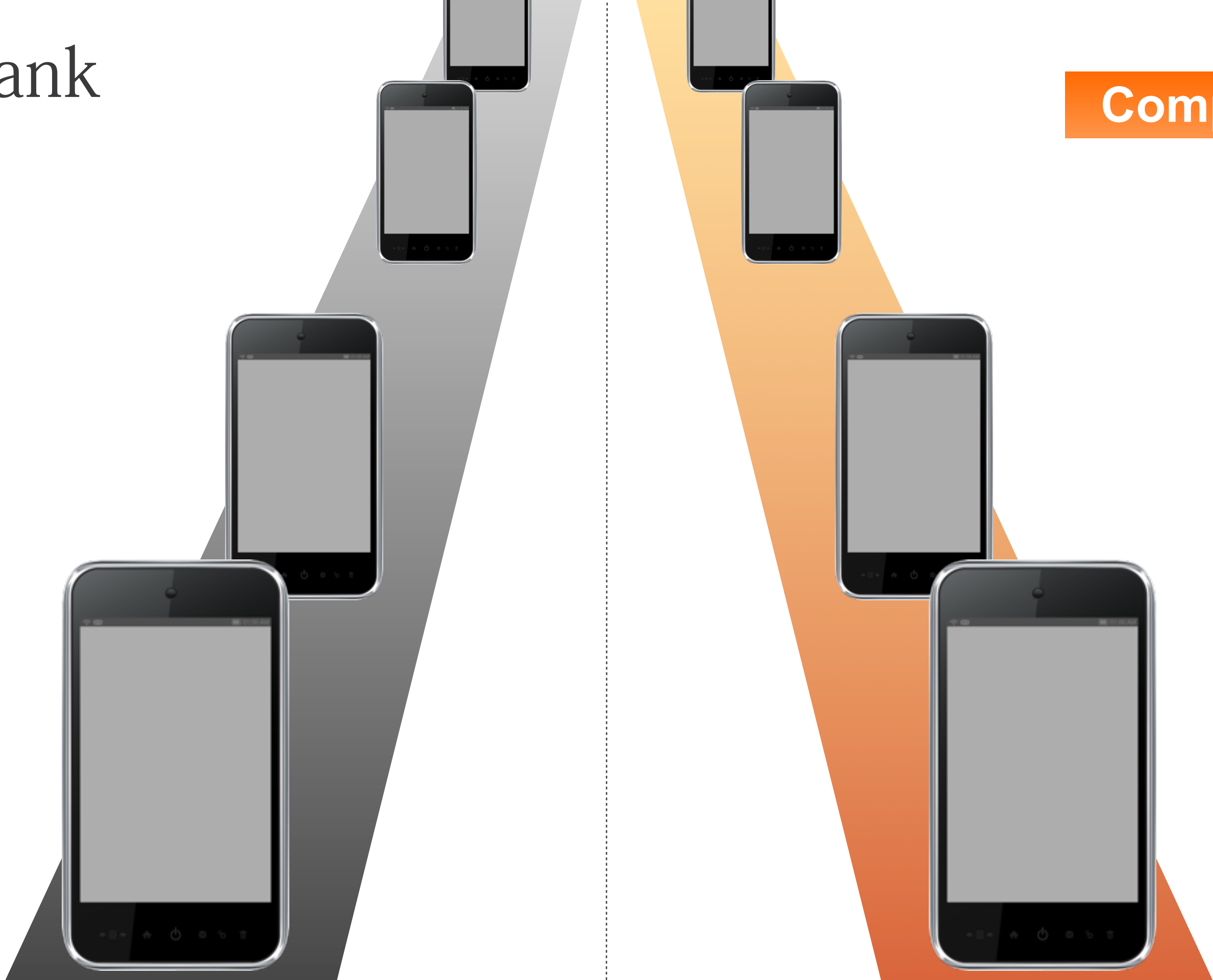


**Imagine  
an expressway...**

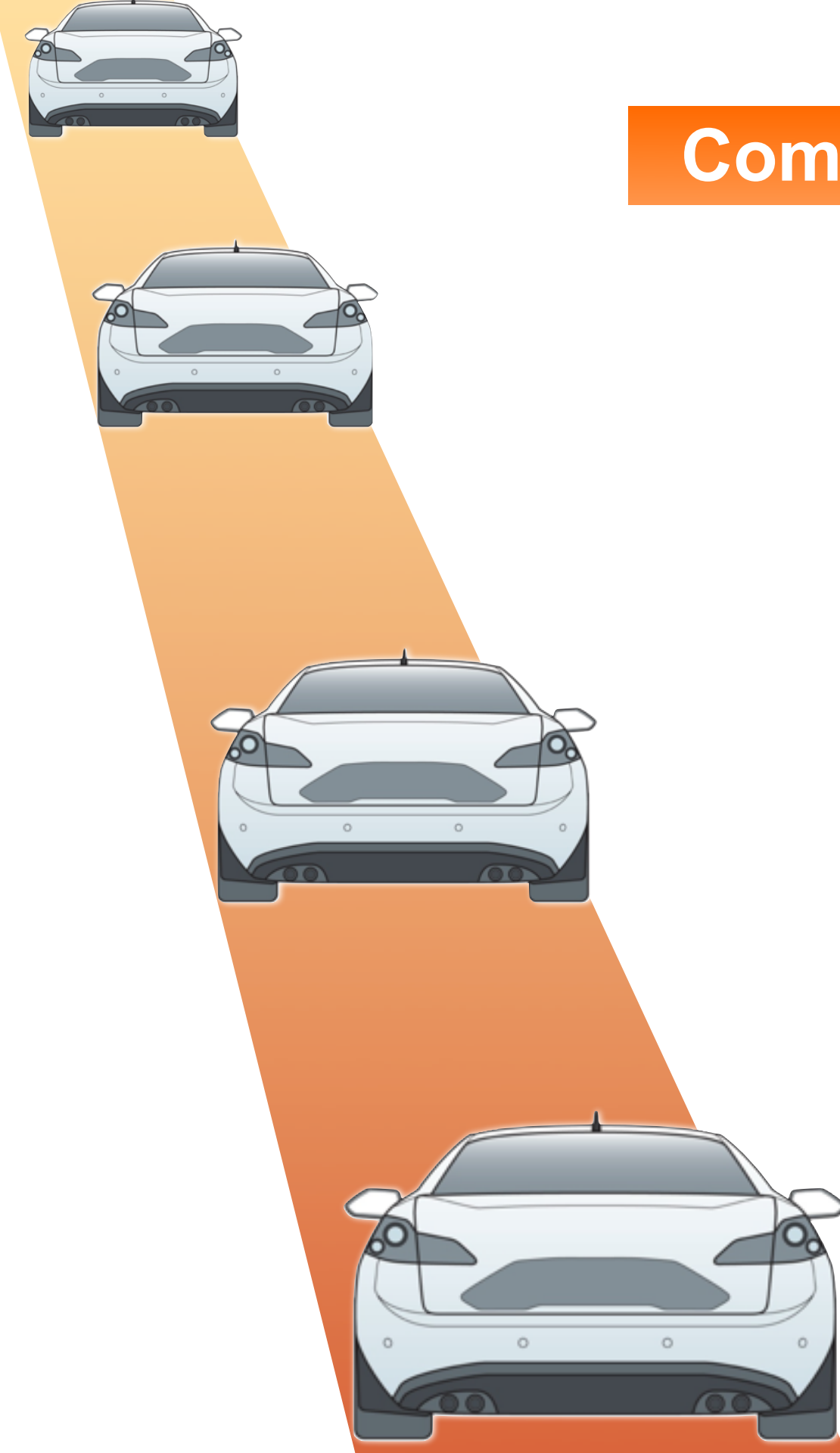
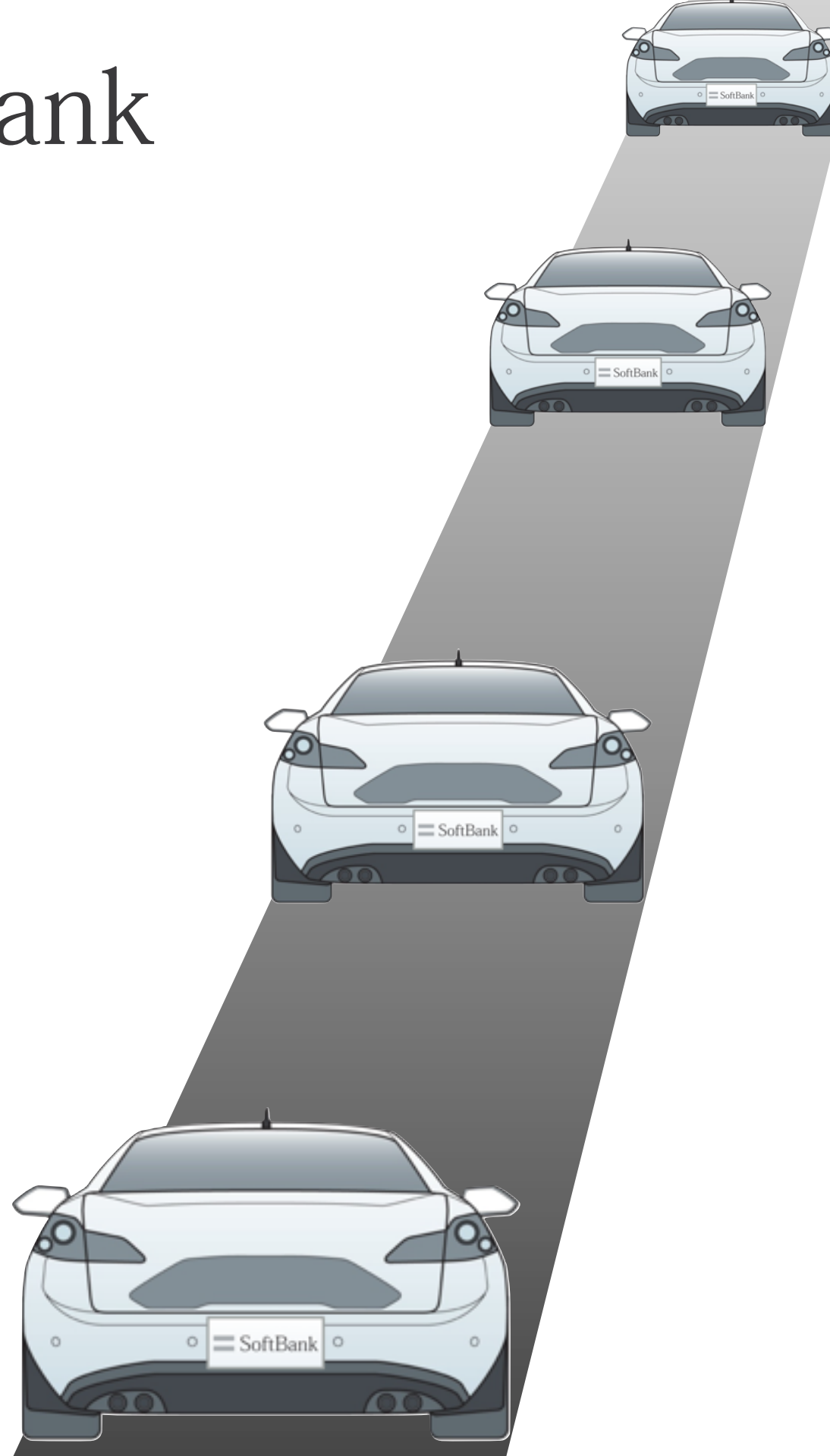


SoftBank

Competitor



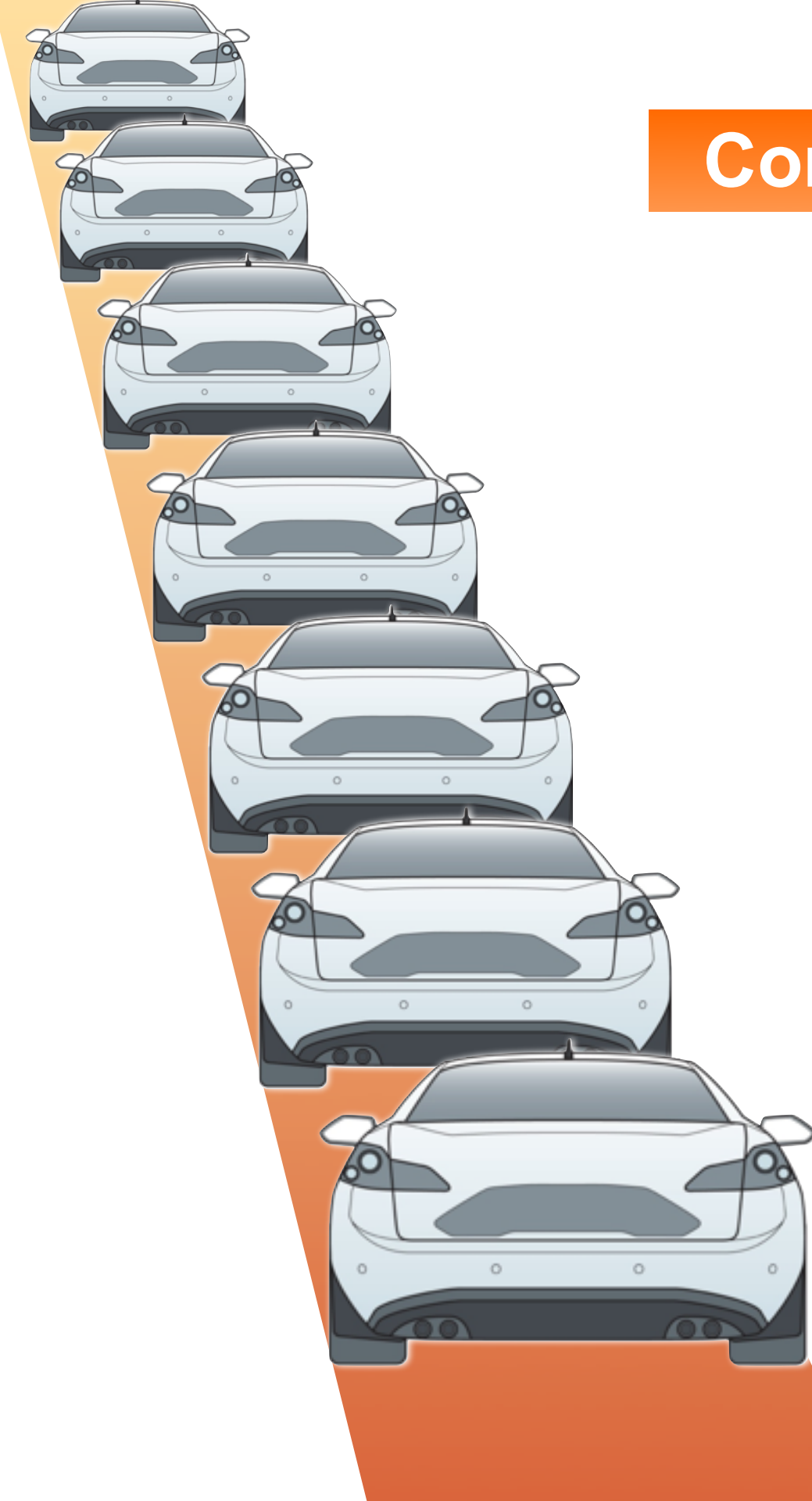
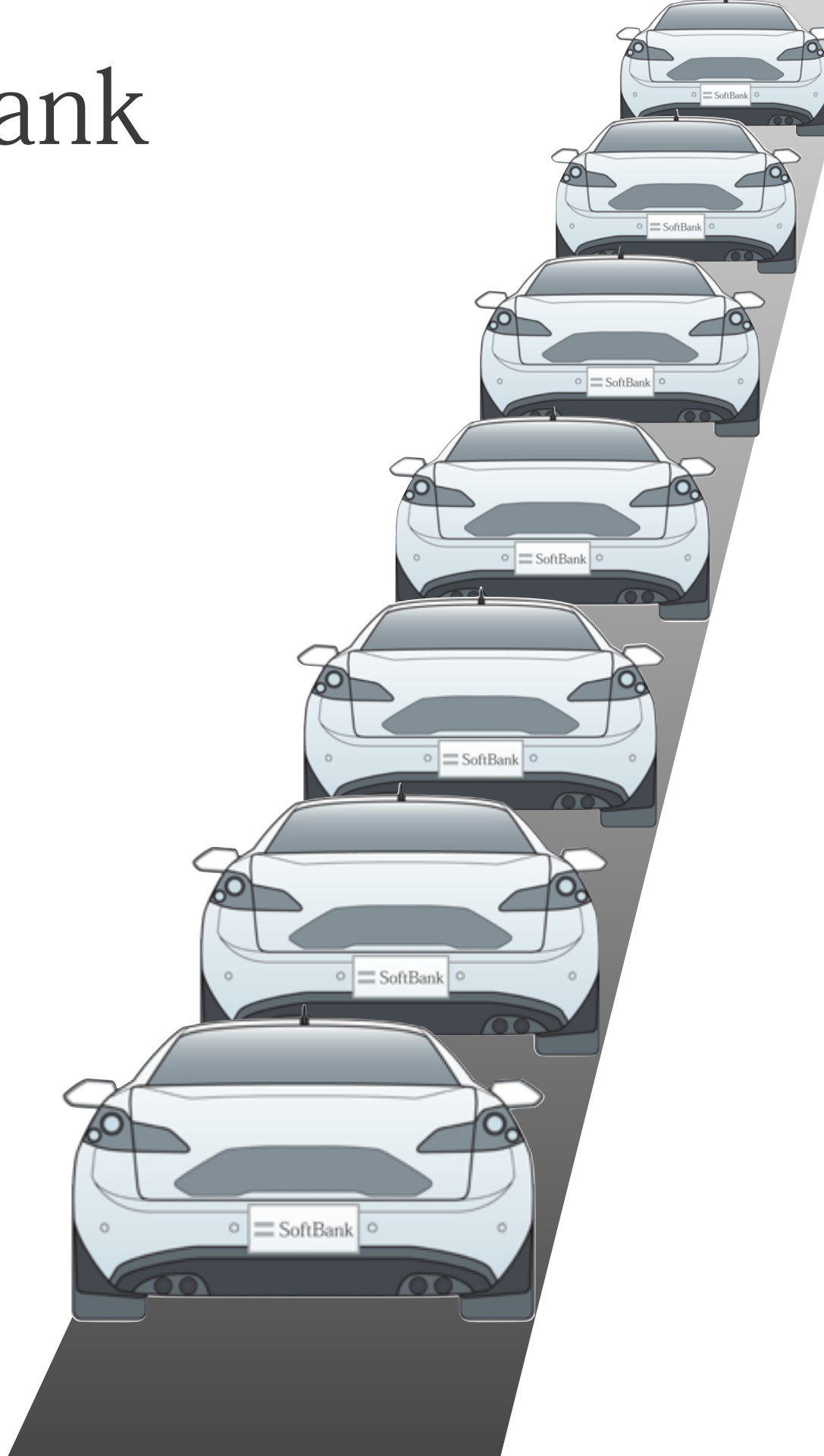
 SoftBank



**Competitor**

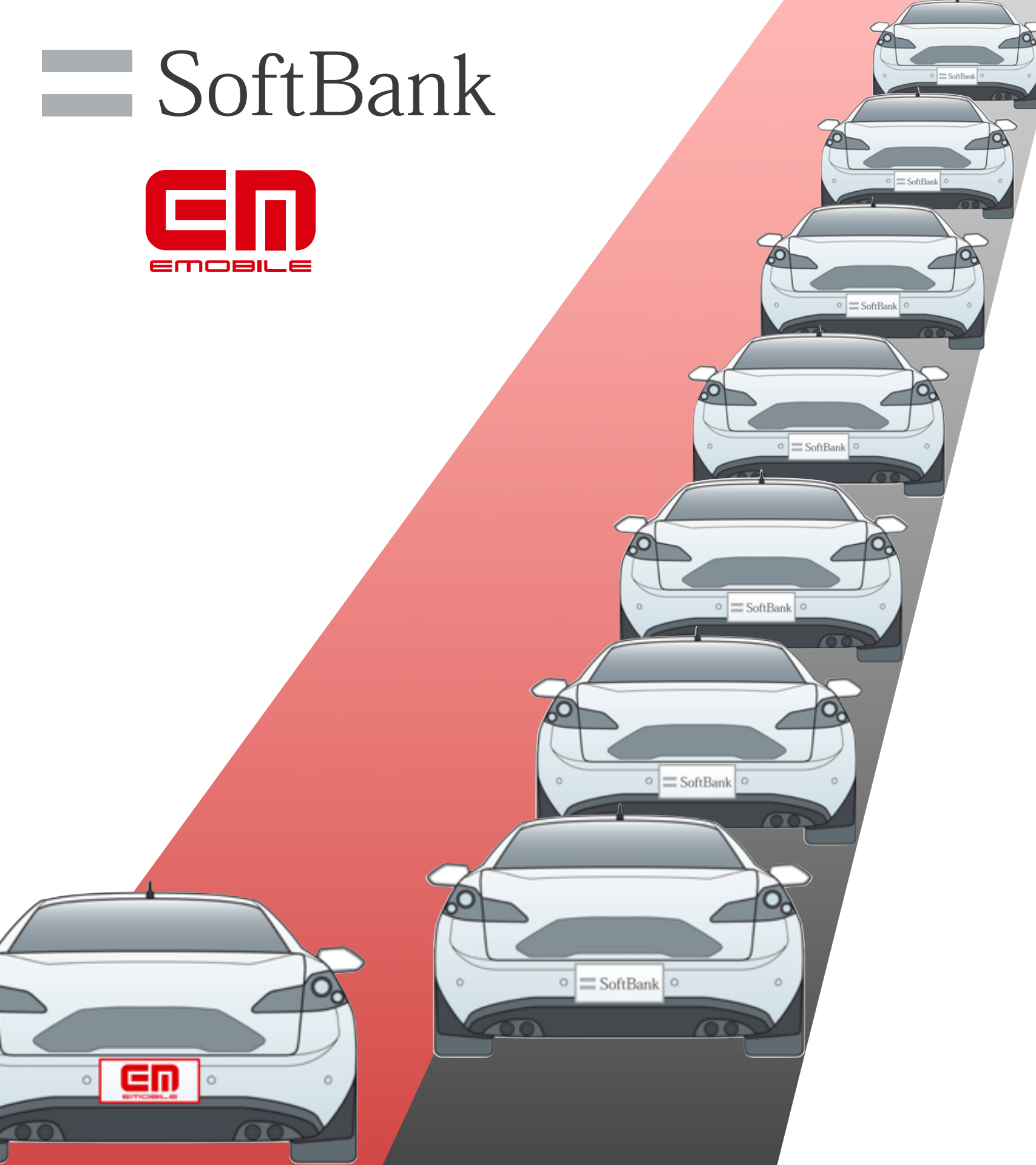


 SoftBank

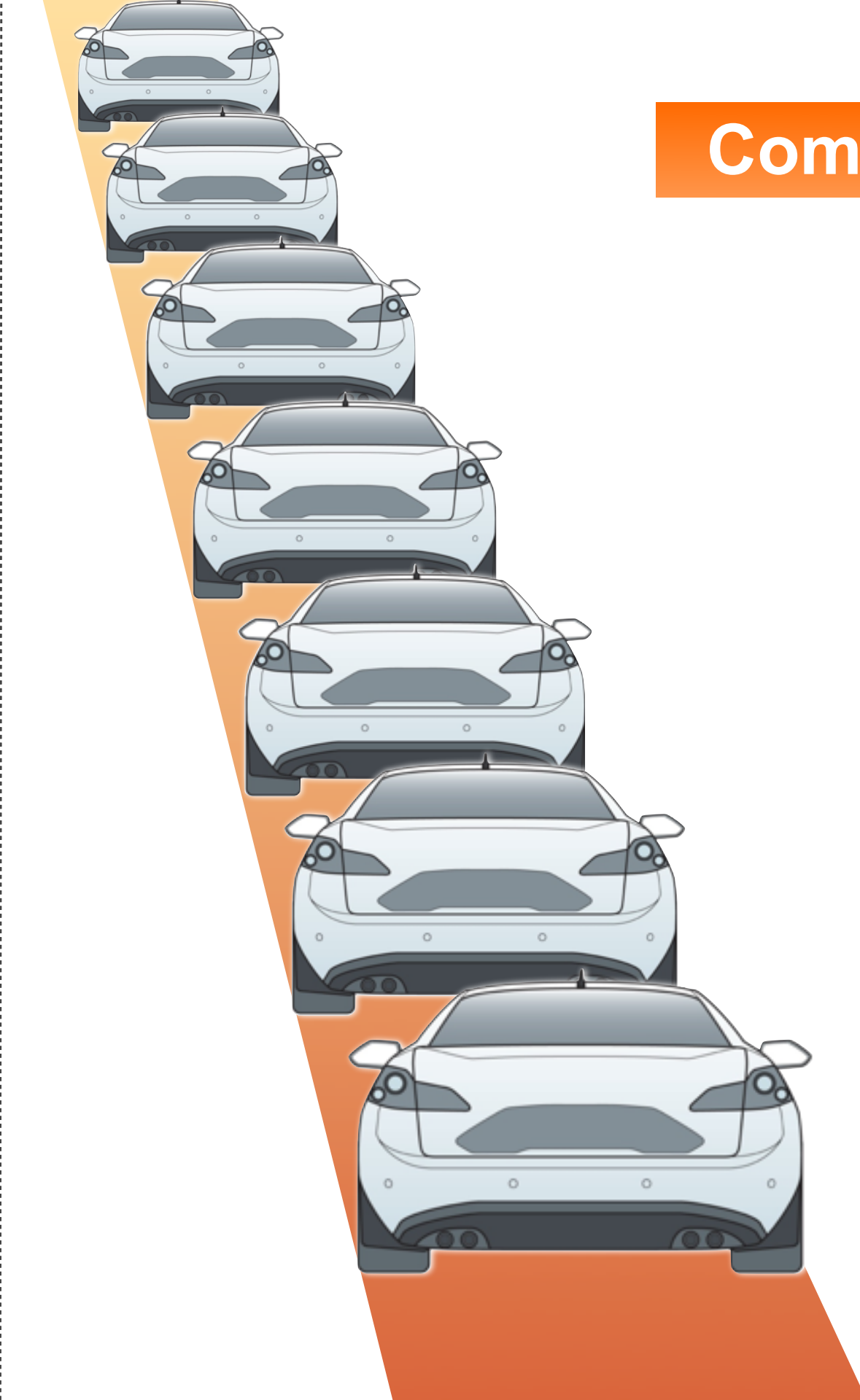


**Competitor**

SoftBank



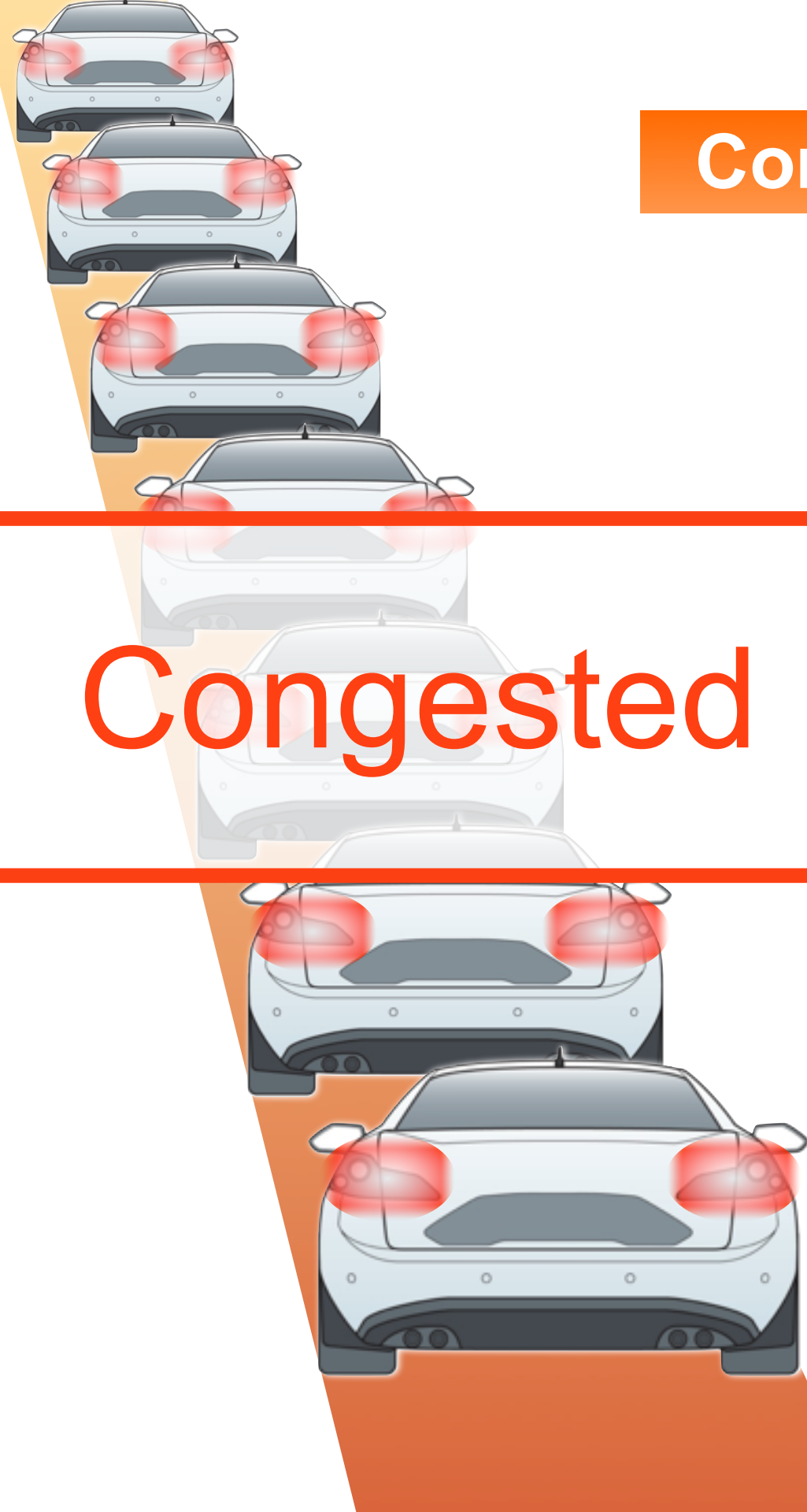
Competitor



SoftBank



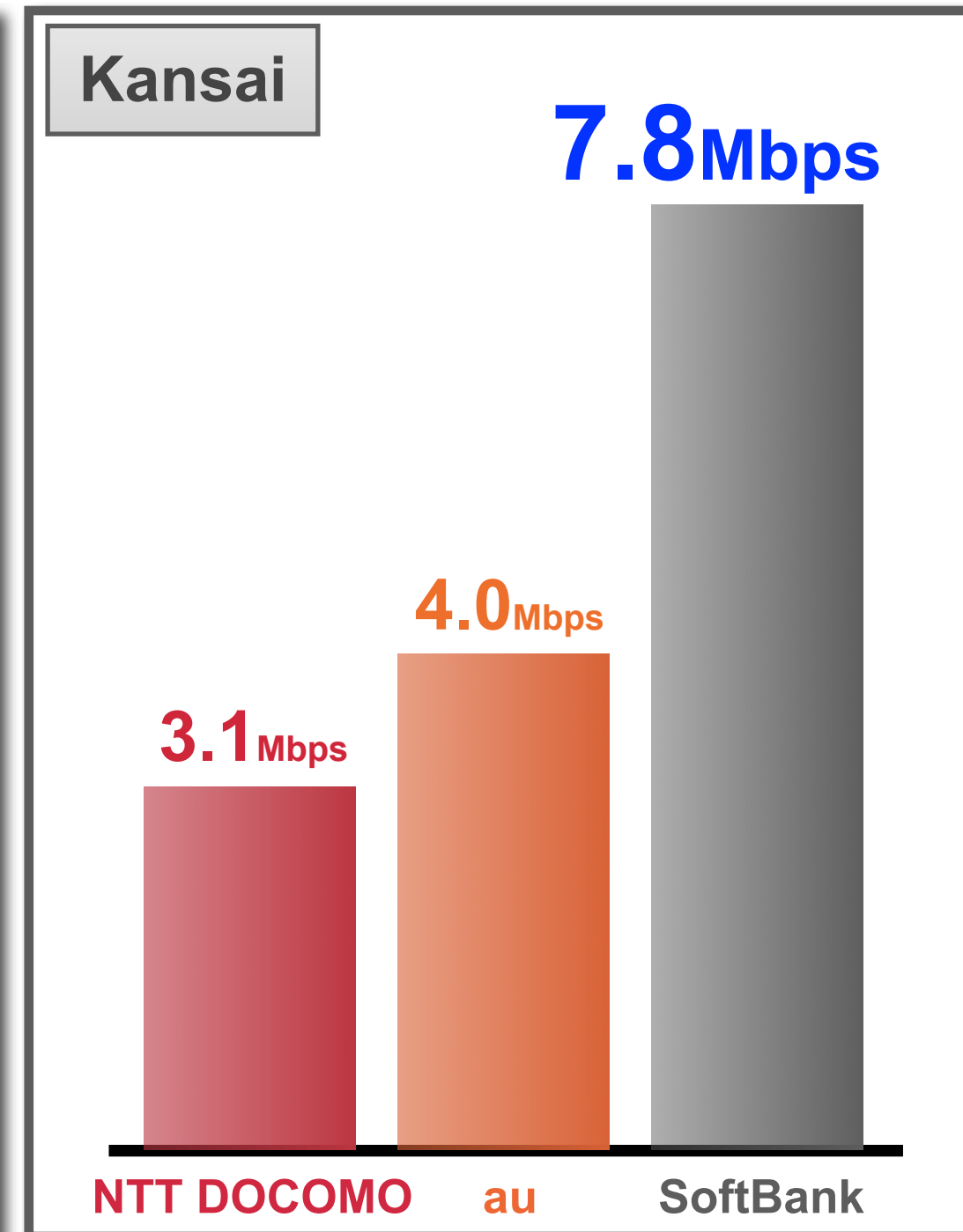
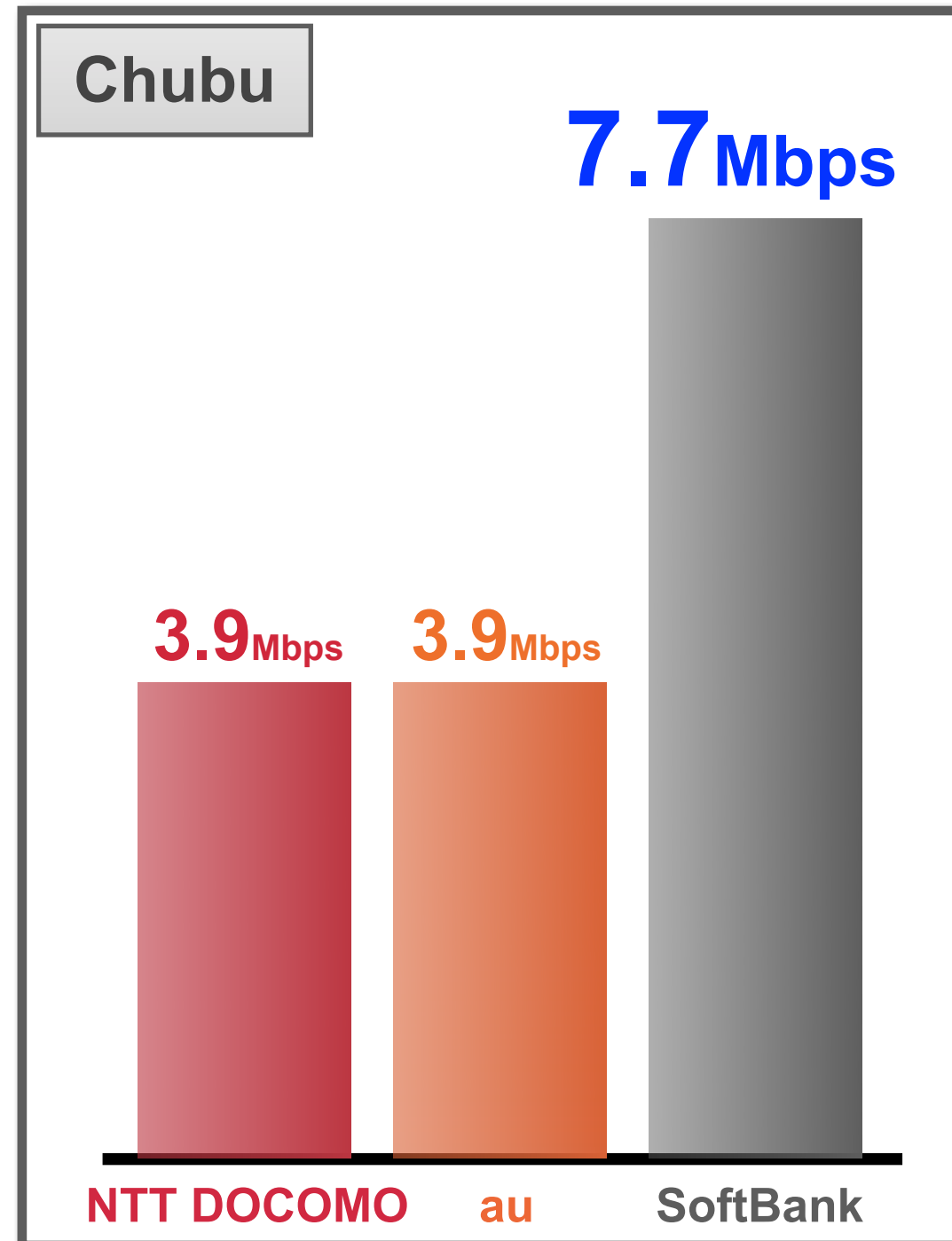
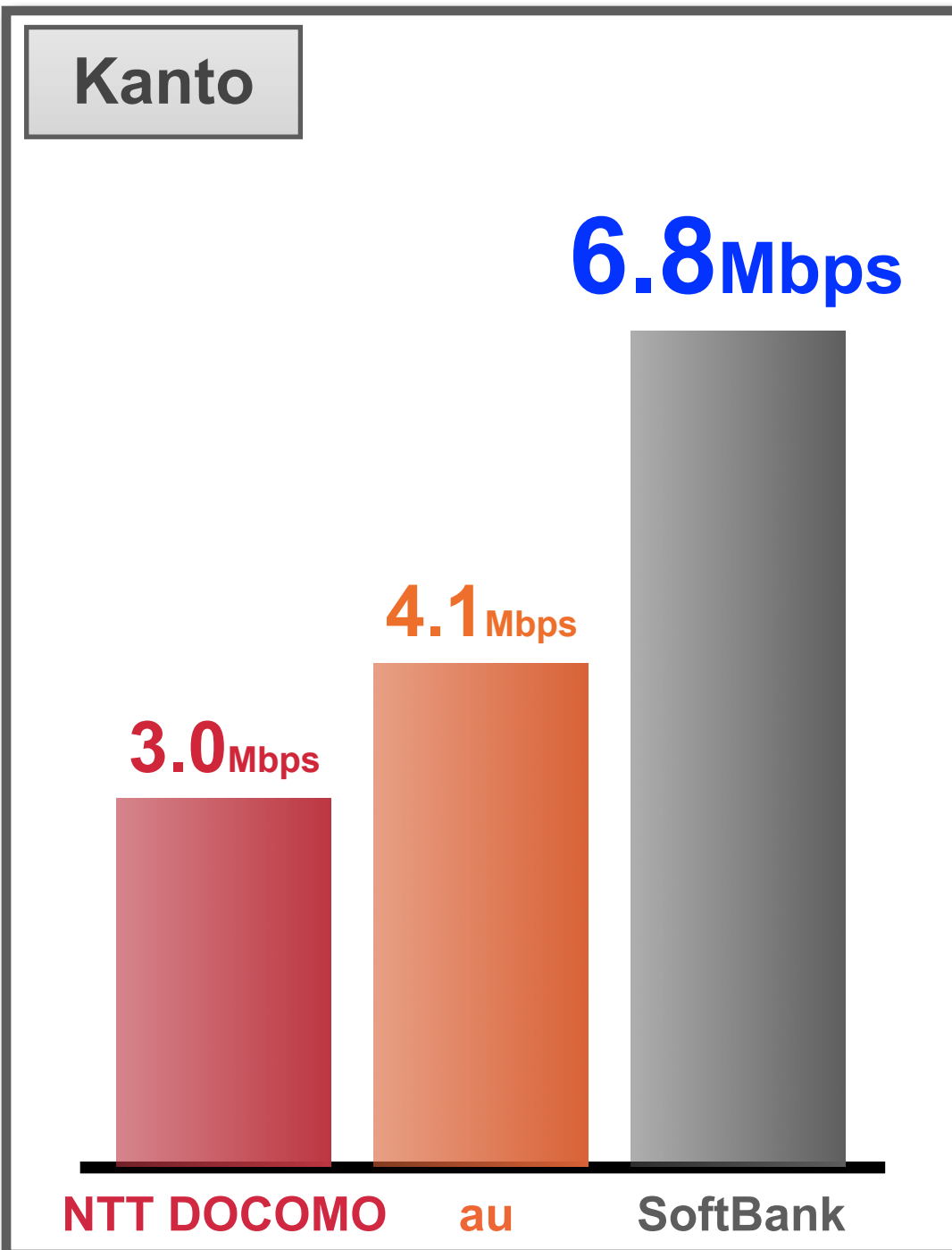
Comfortable LTE



Congested LTE

Competitor

# Average Communication Speed by Region (All OS / LTE+3G)



\*Source: RBB TODAY survey (March 13, 2013)

Users' communication speed measured with a speed measuring app for smartphones "RBB TODAY SPEED TEST" (November 1, 2012 - January 31, 2013)





**@inosenaoki**  
(Governor of Tokyo)

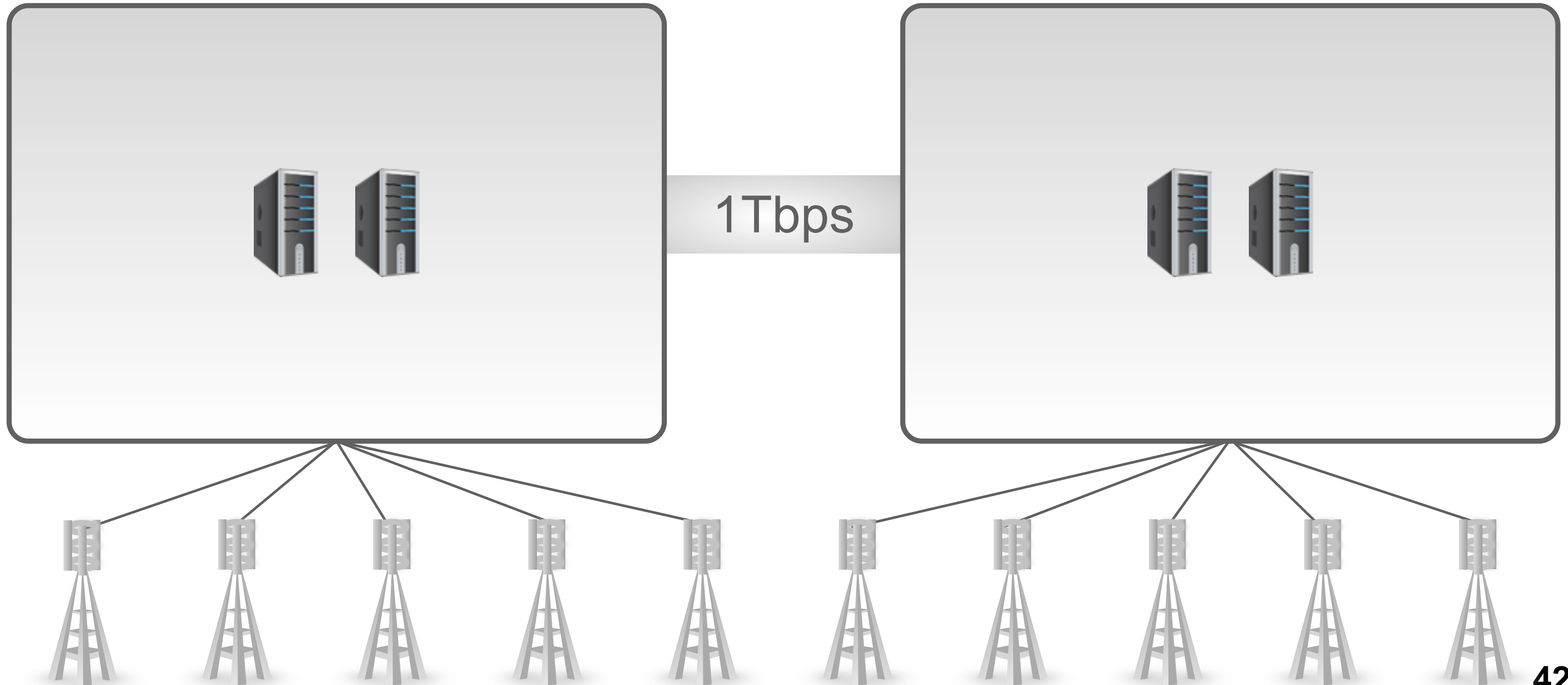
**March 21, 2013**  
**Mobile phone services**  
**become available in trains**  
**on all Tokyo Metro lines.**

\*Excluding section between Kotakemukaihara and Senkawa stations  
(due to construction of connection lines)

# Full IP Backbone

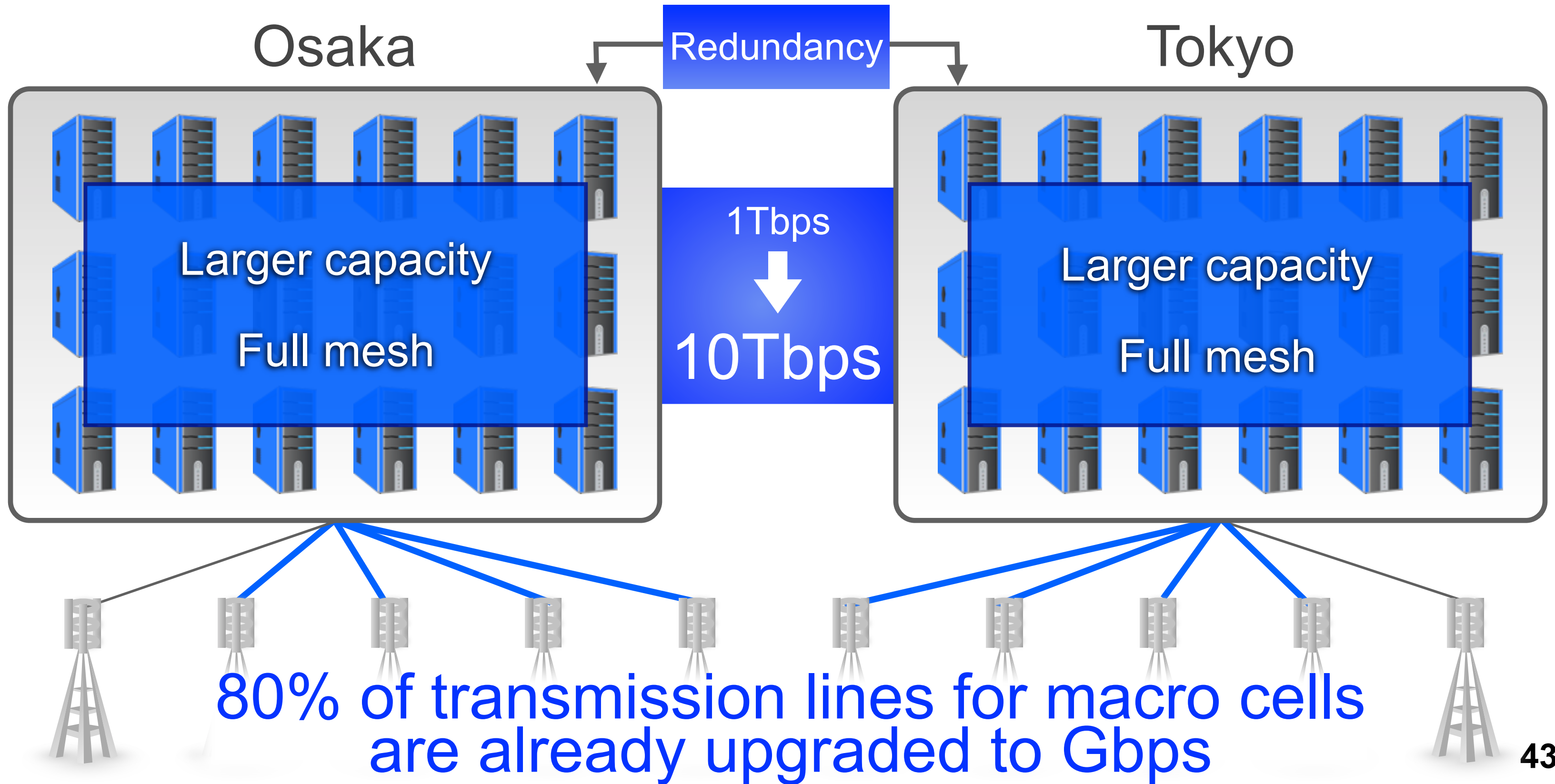
Osaka

Tokyo





# Full IP Backbone

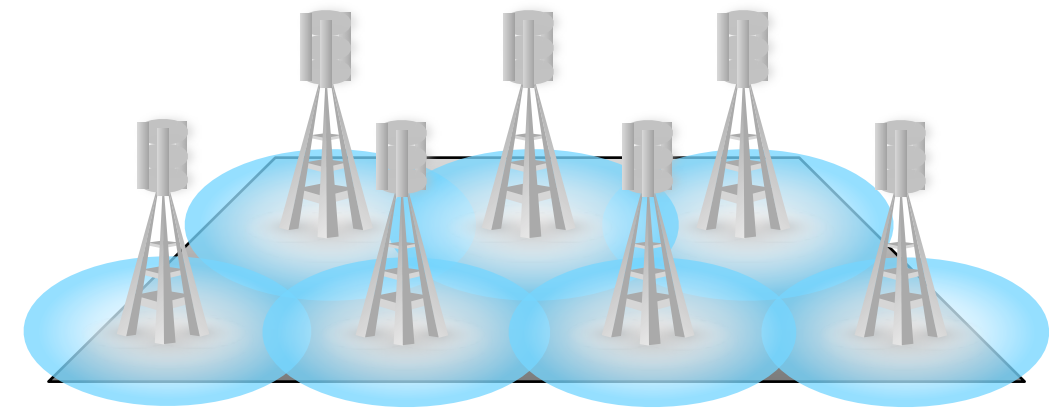


# Network in Smartphone Era



**Platinum Band**

+












**Small cells**

**Full IP backbone**



Significant Accidents Reported  
to the Minister (since June 2011)

Date	Carrier	Affected users
2011/6/6		1.5m
2011/8/16		1.1m
2011/11/2		1.1m
2012/1/1		2.61m
2012/1/25		2.52m
2012/1/25		74k *
2012/2/9		1.3m
2012/2/11		6.15m
2012/12/31		Max. 1.8m

SoftBank reported  
**Zero**  
significant  
accidents  
for over 660 days\*\*

Significant accident  
subject to reporting

Affecting more than  
30k users for over 2  
straight hours

\* including users of KDDI's fixed-line communications service      \*\* as of March 21, 2013

(Source: The Ministry of Internal Affairs and Communications "Telecommunication services accidents (FY2011)" and KDDI's briefing session (January 16, 2013))

**As a result:**

# Call Connection Rate



# Call Connection Rate Survey

(IPSOS, Global No.2 research firm)

## Subject

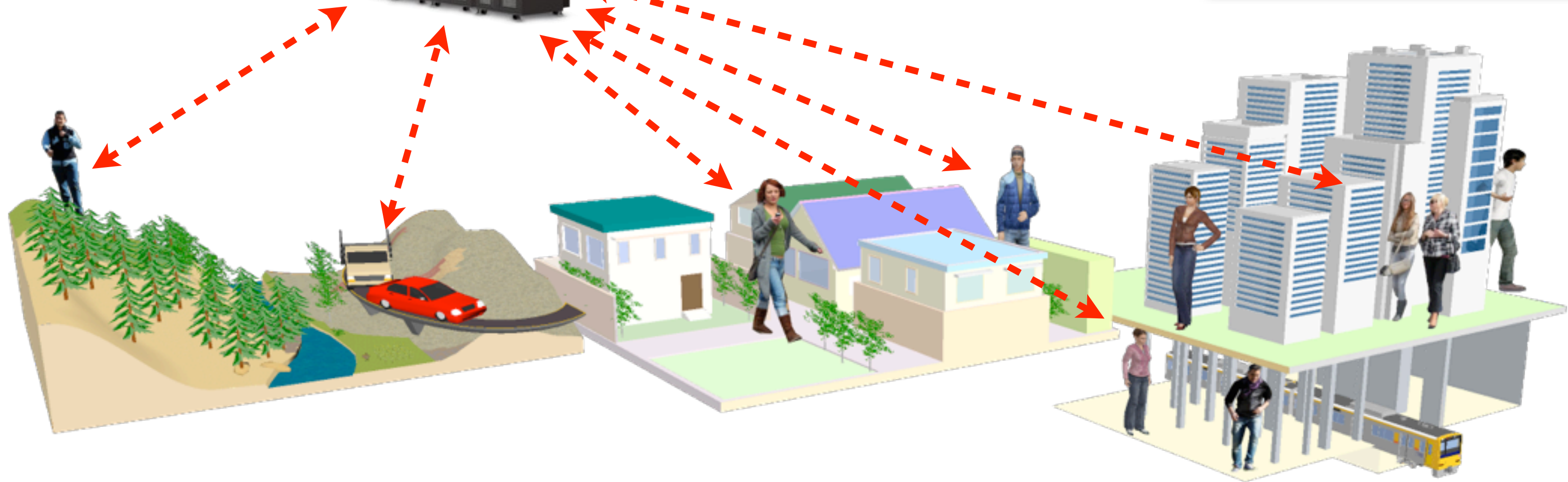
Users agreed to survey  
30,000 users  
(10k users x 3 carriers)

smartphone users  
included  
12,400 users

Calling system



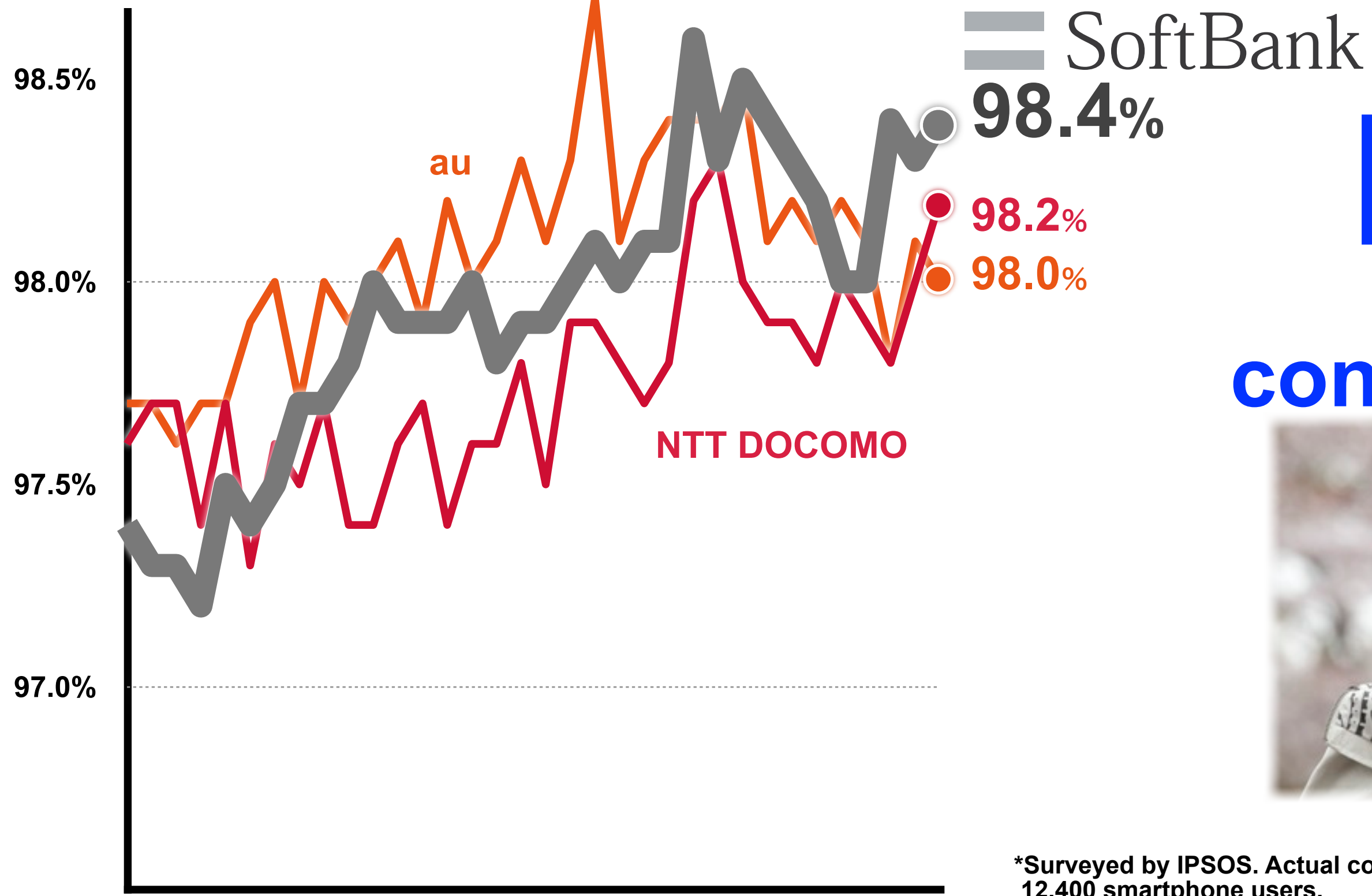
Number of calls:  
**15 times/user per month**



Analyze 190k call test data per month



# Smartphone Call Connection Rate (Japan)



**No. 1**  
in call  
connection rate



2012/7/24

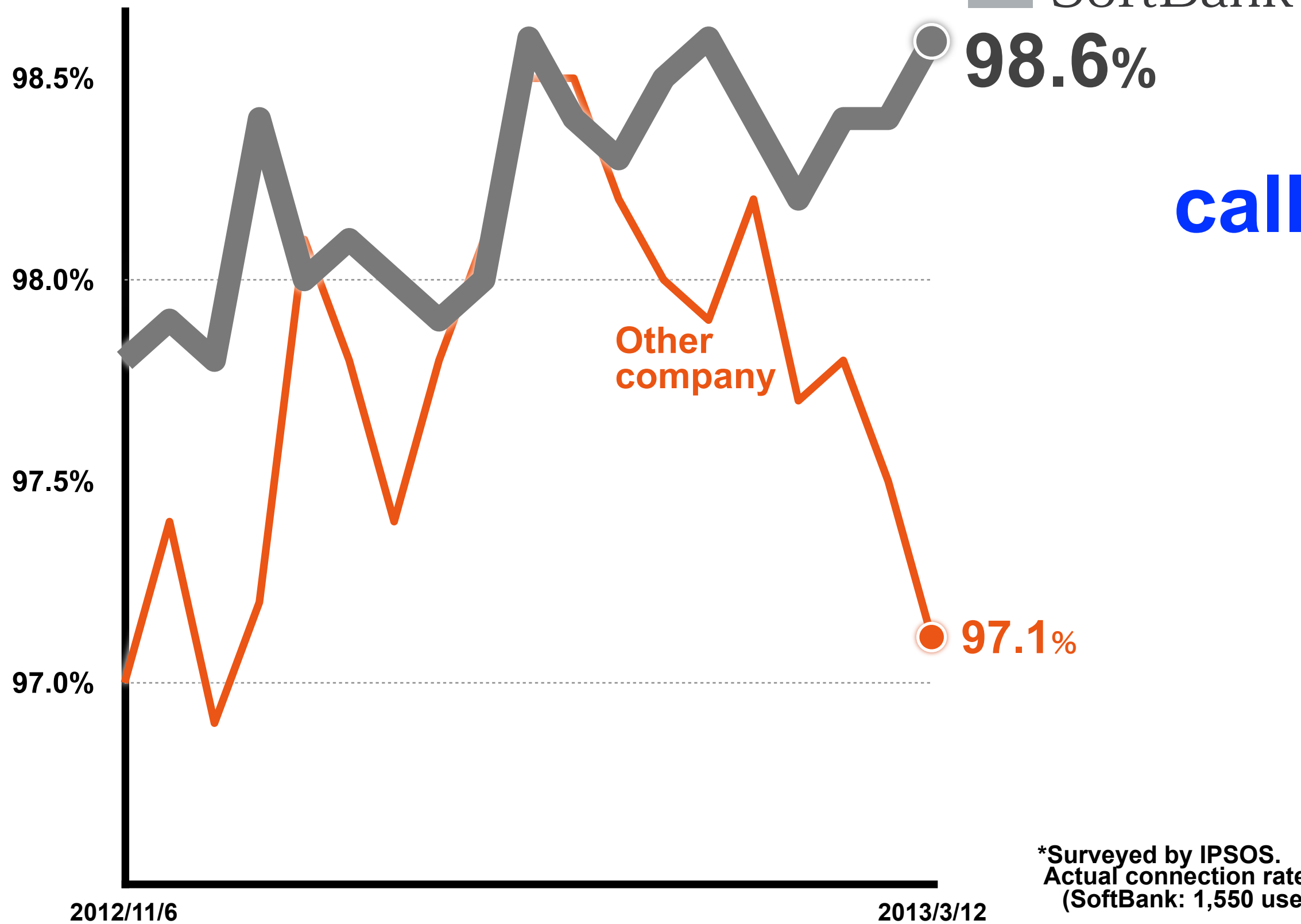
2013/3/12

\*Surveyed by IPSOS. Actual connection rate on calls made to 12,400 smartphone users.

(SoftBank: 5,300 users, NTT DOCOMO: 3,400 users, au: 3,700 users)



# iPhone 5 Call Connection Rate (Japan)



**No. 1**  
in iPhone 5  
call connection rate



\*Surveyed by IPSOS.  
Actual connection rate on calls made to 2,500 iPhone 5 users nationwide.  
(SoftBank: 1,550 users, other company: 950 users)

2012/11/6

2013/3/12

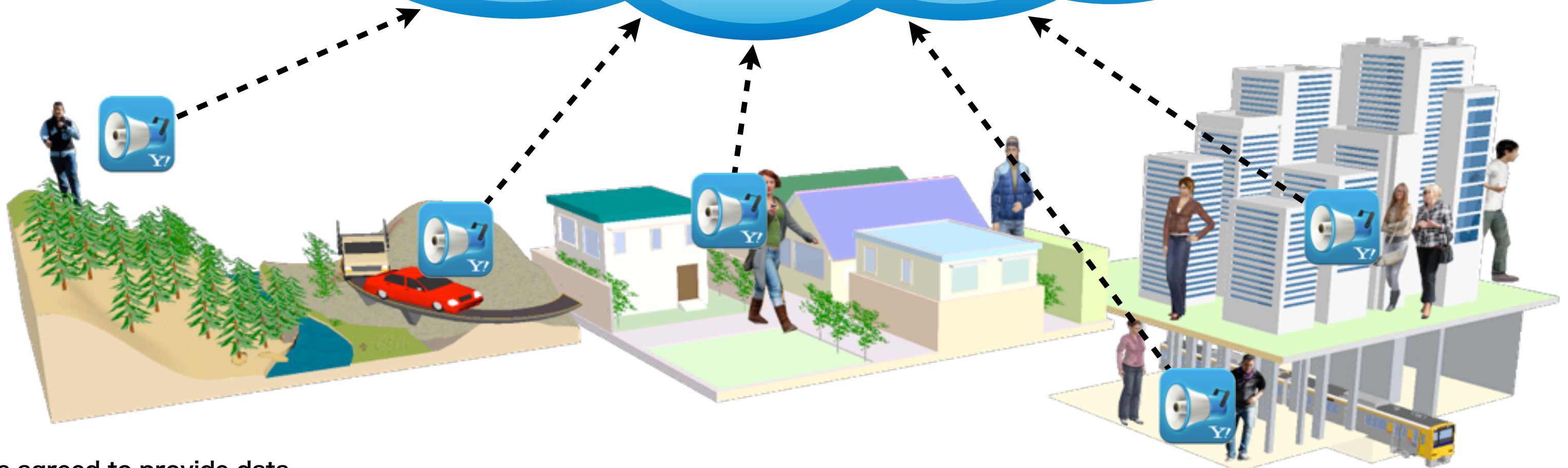
# Packet connection rate

# Packet Connection Rate Survey

(Patent applied for)

**150m data  
communication  
logs per month**

Analysis system  
(Agoop Corp.)



\*Users agreed to provide data



# Packet Connection Rate Survey

(Patent applied for)



Analysis system  
(Agoop Corp.)

**150m data  
communication  
logs per month**

Handsets send location data every 30 min. or when on the move.  
Out of coverage or out of connection for 10 sec. is regarded  
as no connection



# Packet Connection Rate Survey

(Patent applied for)



Analysis system  
(Agoop Corp.)

**150m data  
communication  
logs per month**

**GPS data**

**Building data**

**Base station data**

**Time data**

# Packet Connection Rate Survey

(Patent applied for)

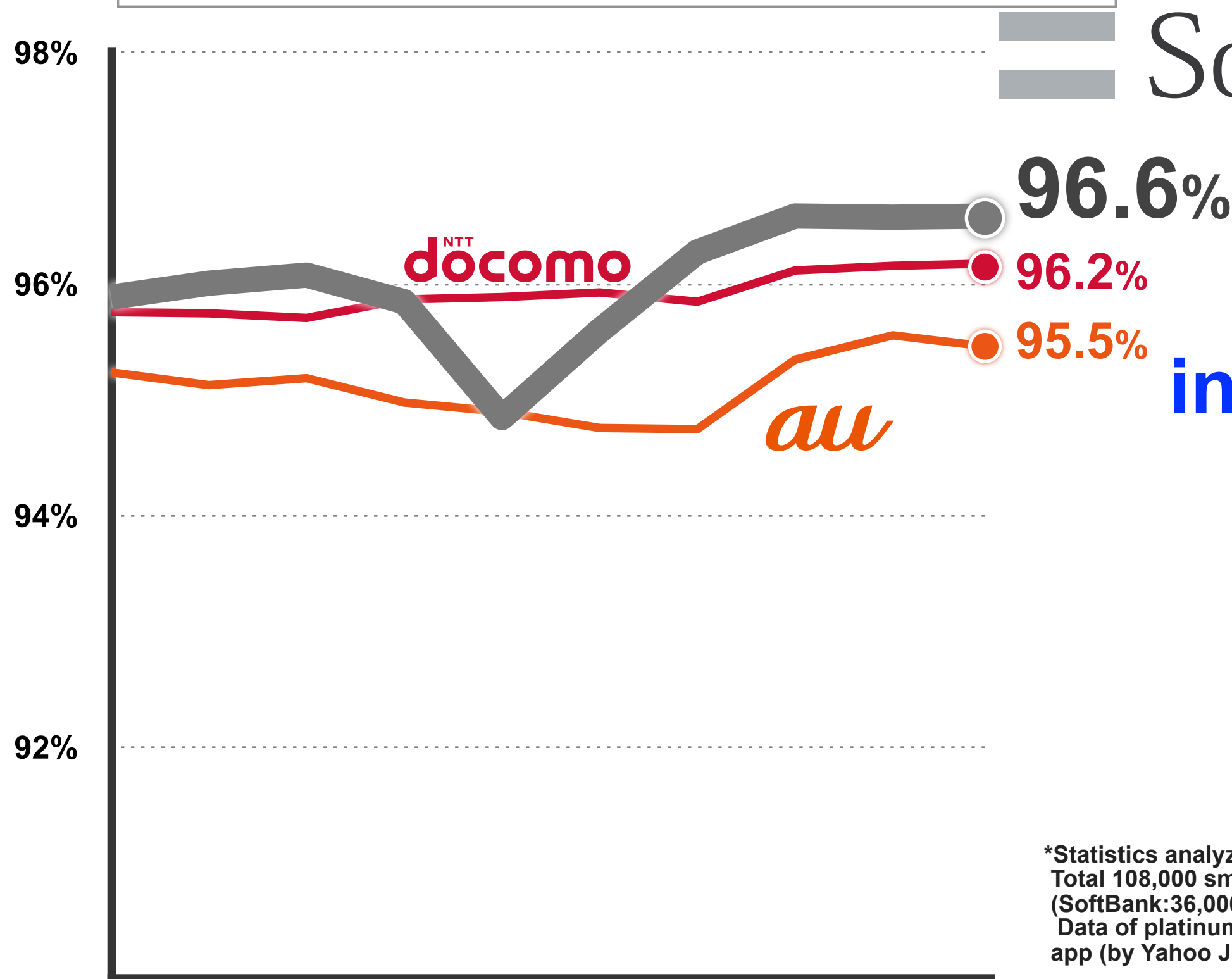


Analysis system  
(Agoop Corp.)

Use for optimization  
of base station design



**Packet Connection Rate**  
(Japan, platinum band-compatible smartphones)



SoftBank

**No.1**

**in packet connection rate**



\*Statistics analyzed by Agoop Corp.  
Total 108,000 smartphones were randomly selected for analysis  
(SoftBank:36,000, NTT DOCOMO: 36,000, au:36,000) from January 15 to March 19.  
Data of platinum band compatible smartphones was collected through the disaster warning app (by Yahoo Japan) and Ramen Checker app (by Agoop)



# iPhone 5 Packet Connection Rate (Japan)

SoftBank

97.4%

# No. 1

## in iPhone 5 packet connection rate

95.6%

Other company



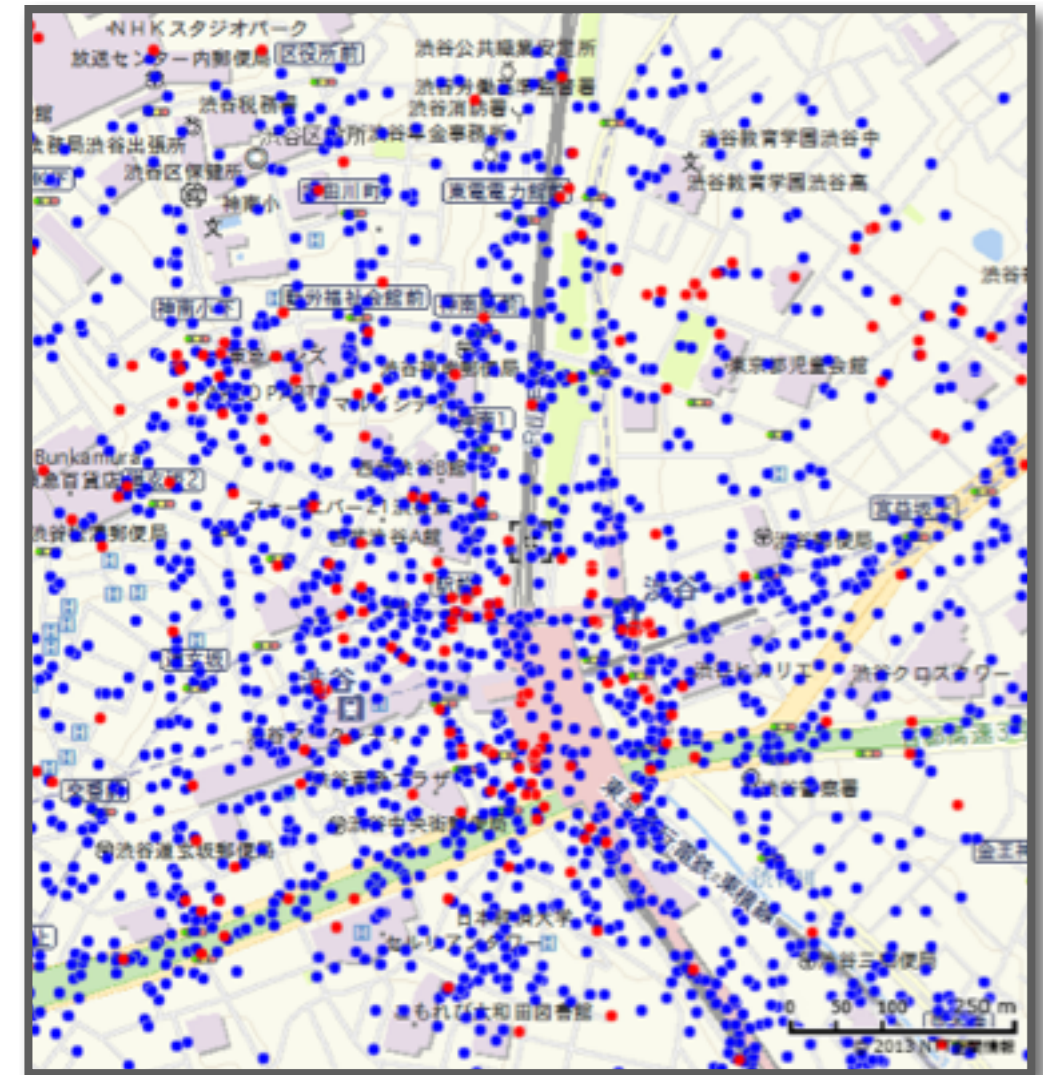
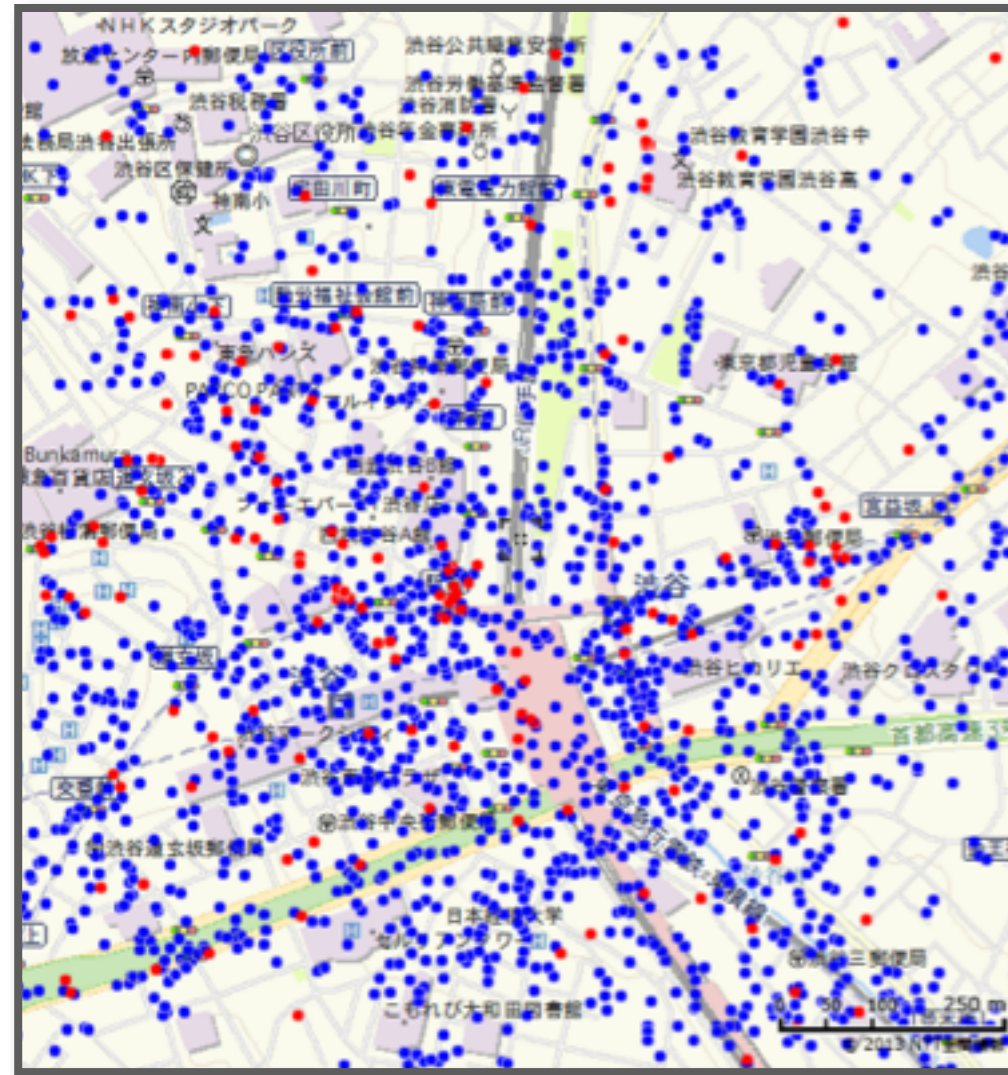
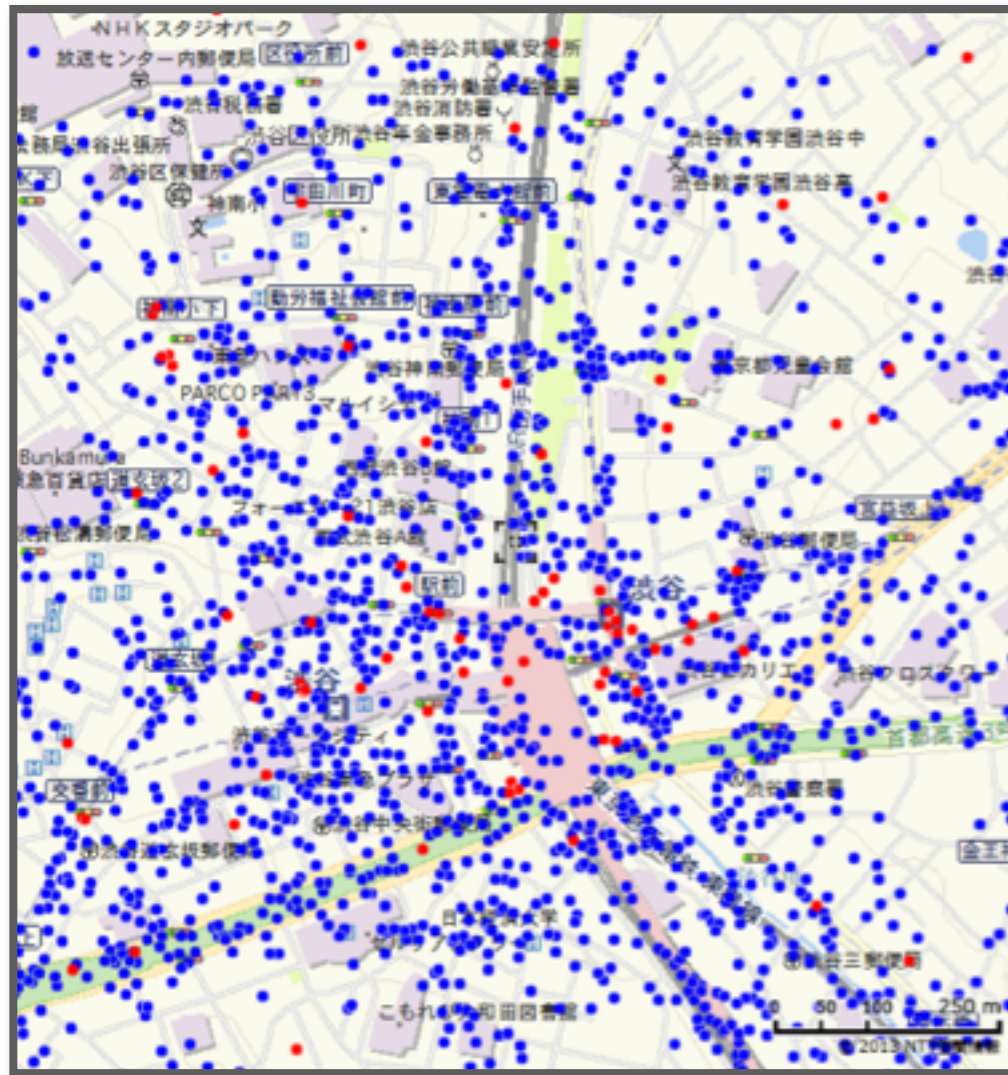
\*Statistics analyzed by Agoop Corp.  
Total 30,000 iPhone 5s (15,000 for each operator) were randomly selected for analysis from February 4 to March 19.  
Data was collected through the disaster warning app (by Yahoo Japan) and Ramen Checker app (by Agoop)

2013/2/4

3/19



# Fully Utilize 150m Data Logs / Month



SoftBank

NTT docomo

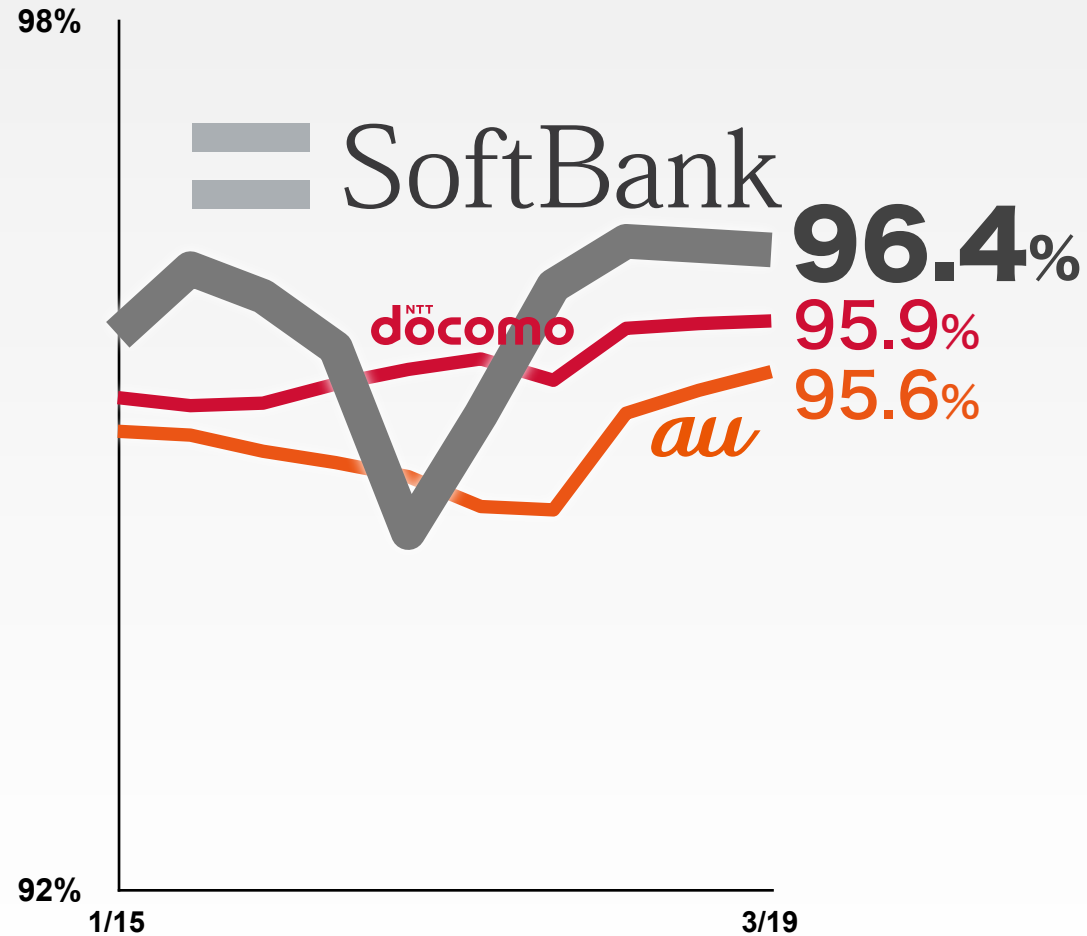
au



# Packet Connection Rate by Region

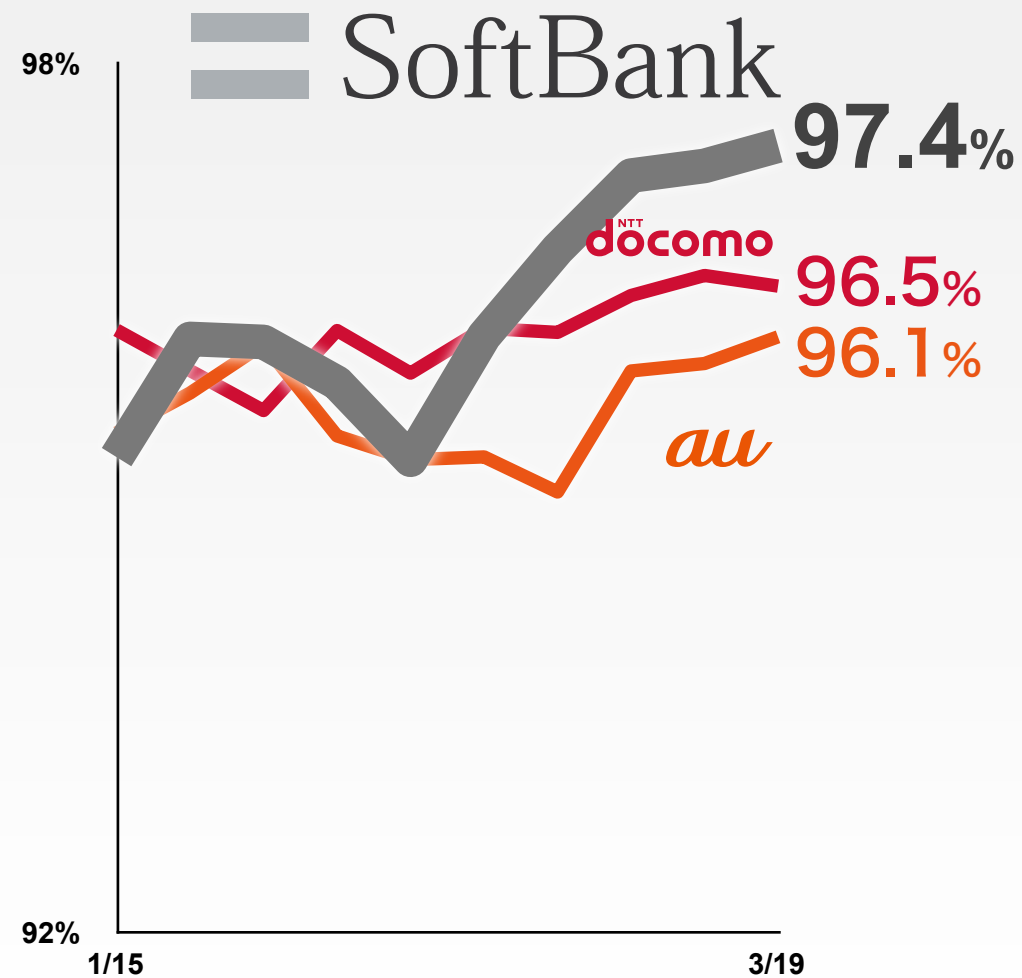
Kanto

SoftBank is No.1



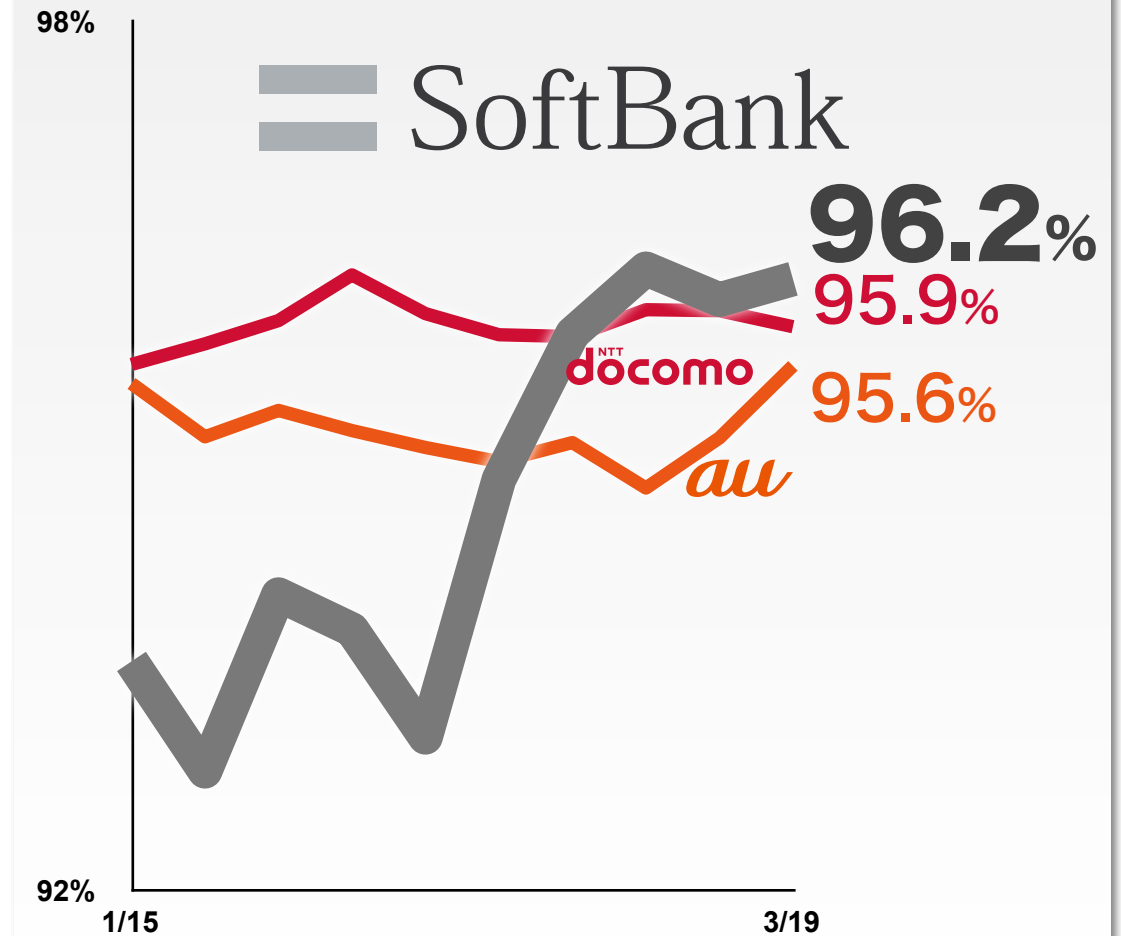
Tokai

SoftBank is No.1



Kansai

SoftBank is No.1



\*Statistics analyzed by Agoop Corp.

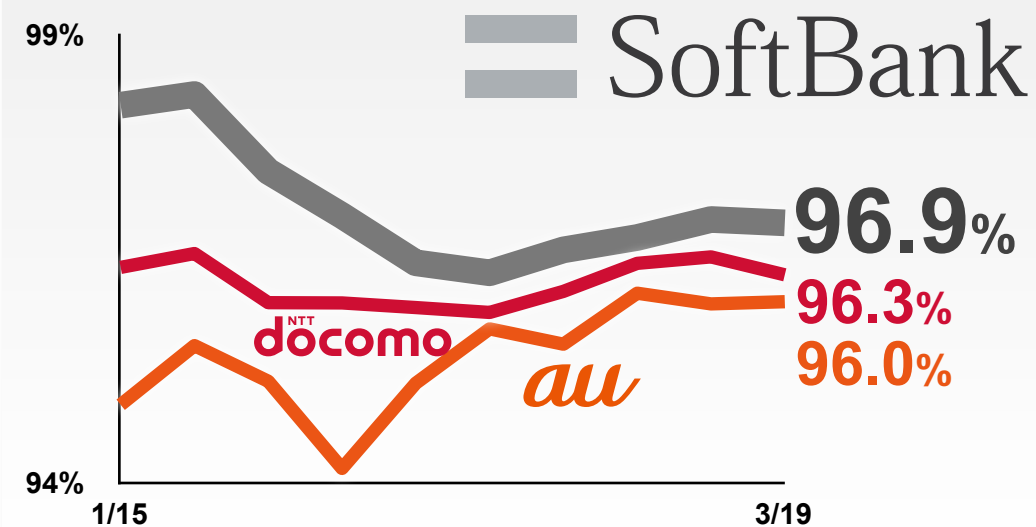
Total 108,000 smartphones were randomly selected for analysis (SoftBank:36,000, NTT DOCOMO: 36,000, au:36,000) from January 15 to March 19.

Data of platinum band compatible smartphones was collected through the disaster warning app (by Yahoo Japan) and Ramen Checker app (by Agoop)

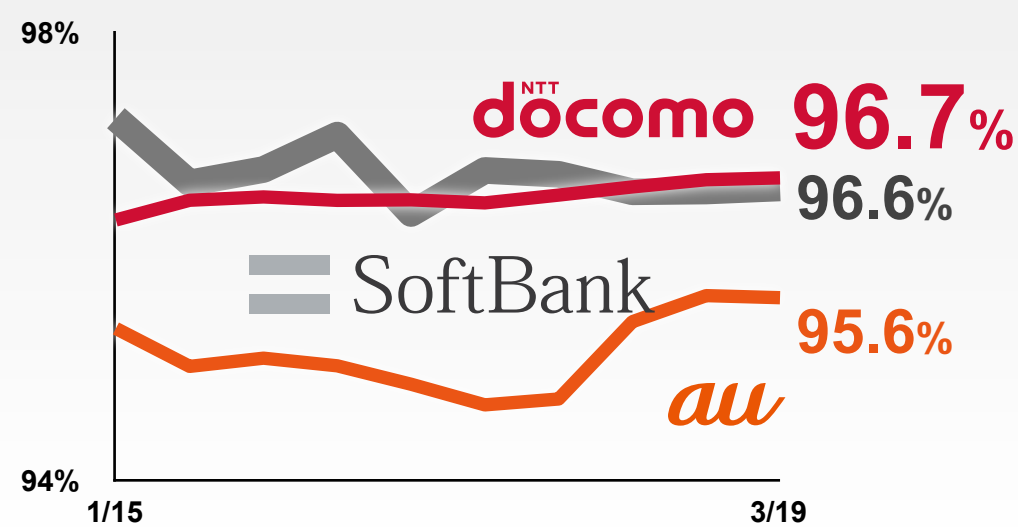


# Packet Connection Rate by Region

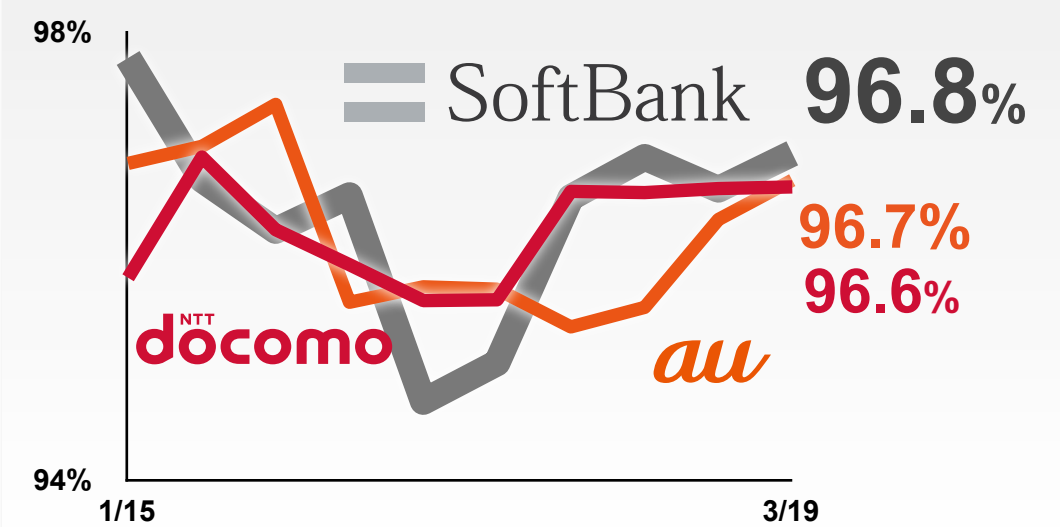
Hokkaido **SoftBank is No.1**



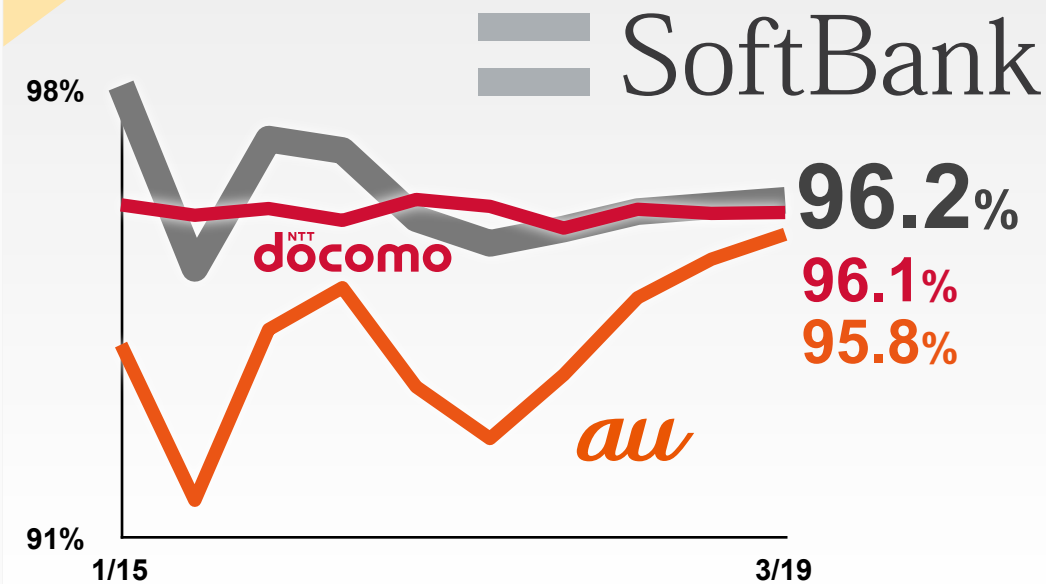
Tohoku **NTT DOCOMO is No.1**



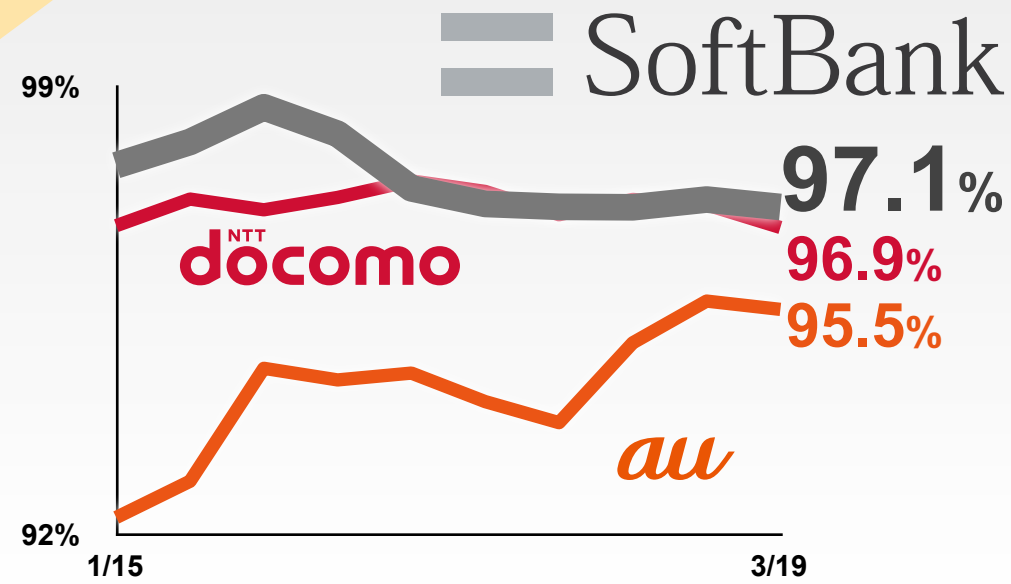
Hokuriku **SoftBank is No.1**



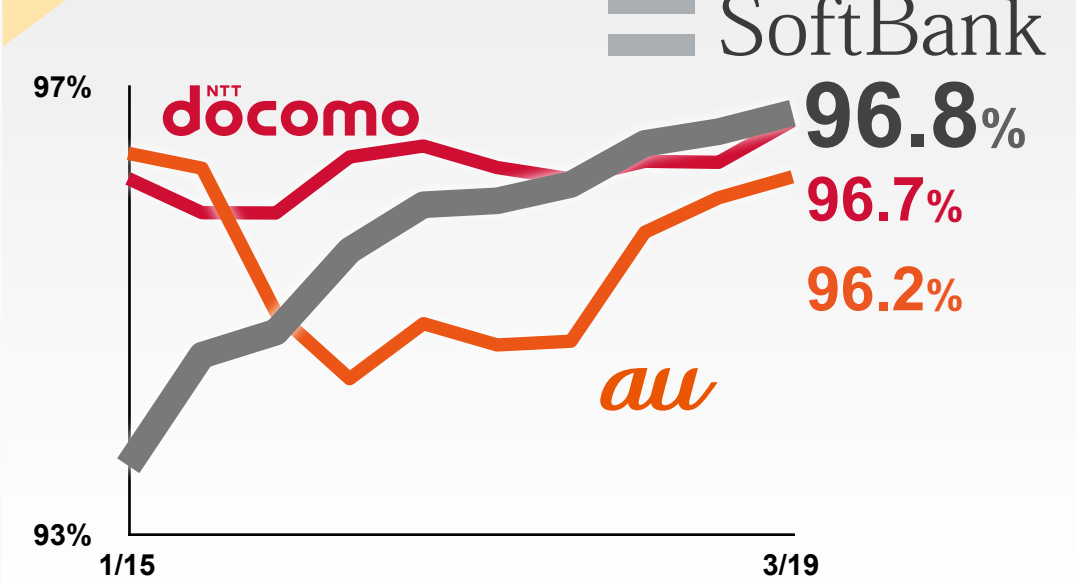
Chugoku **SoftBank is No.1**



Shikoku **SoftBank is No.1**



Kyusyu **SoftBank is No.1**



\*Statistics analyzed by Agoop Corp.

Total 108,000 smartphones were randomly selected for analysis (SoftBank:36,000, NTT DOCOMO: 36,000, au:36,000) from January 15 to March 19.

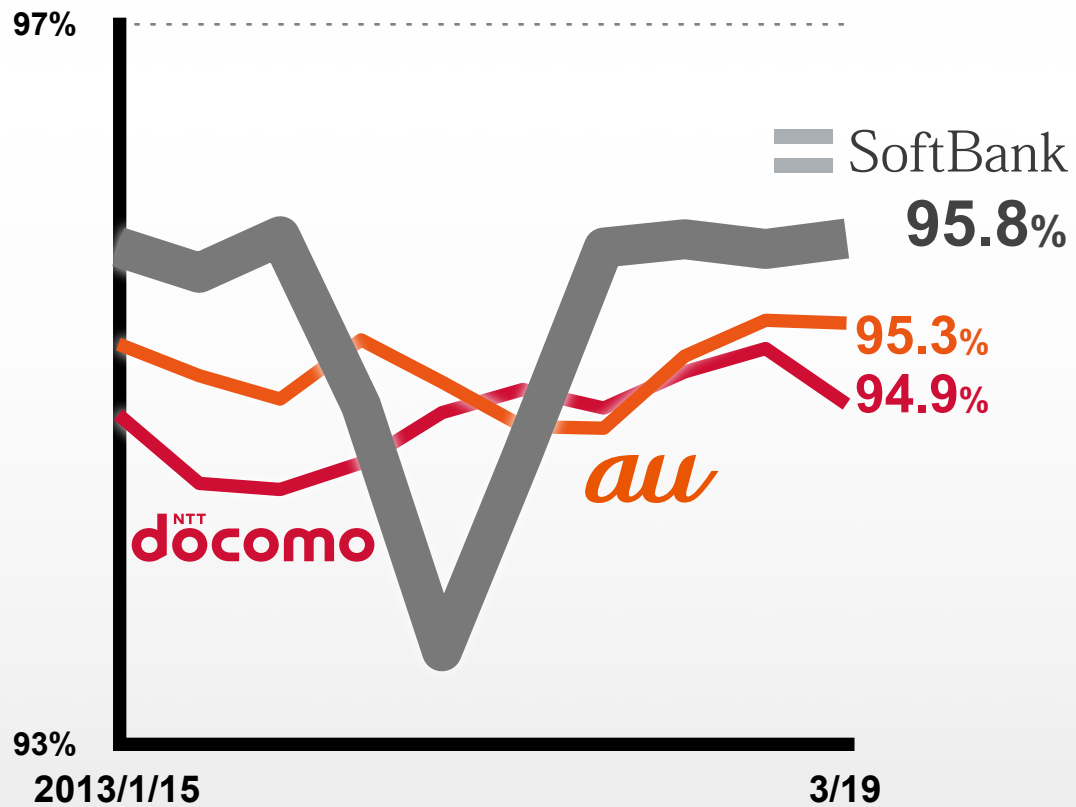
Data of platinum band compatible smartphones was collected through the disaster warning app (by Yahoo Japan) and Ramen Checker app (by Agoop)

# Packet Connection Rate by Area

## Urban



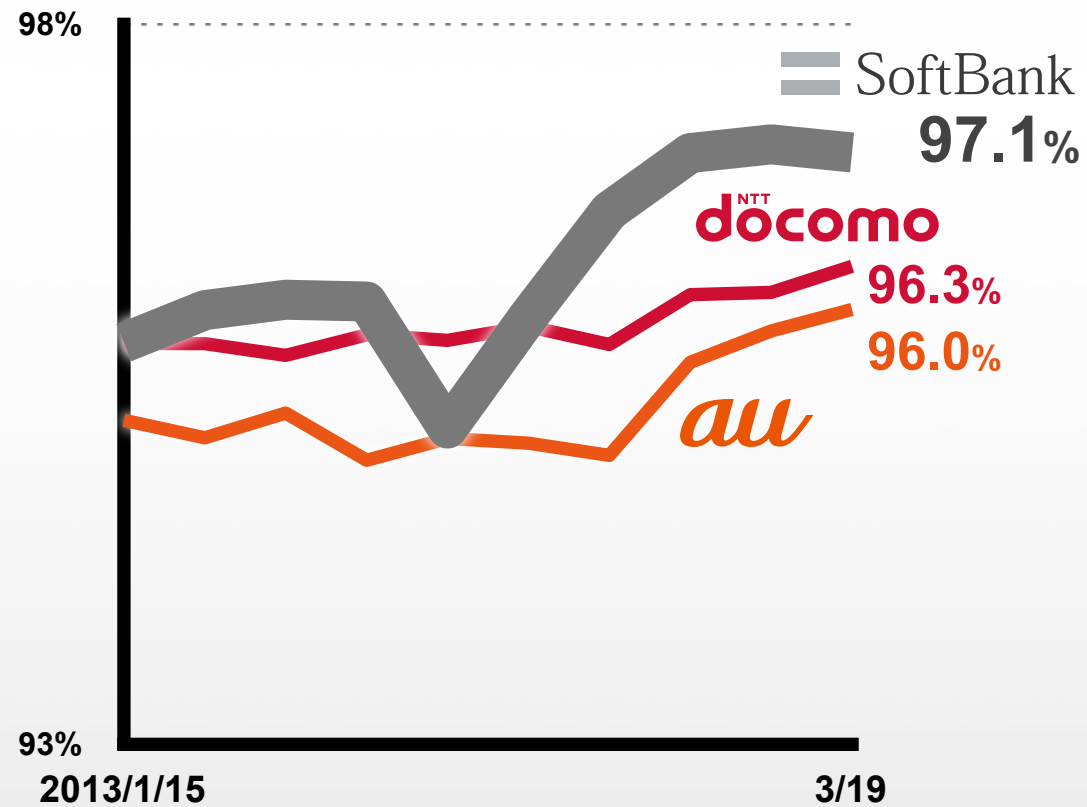
SoftBank is No.1



## Suburb



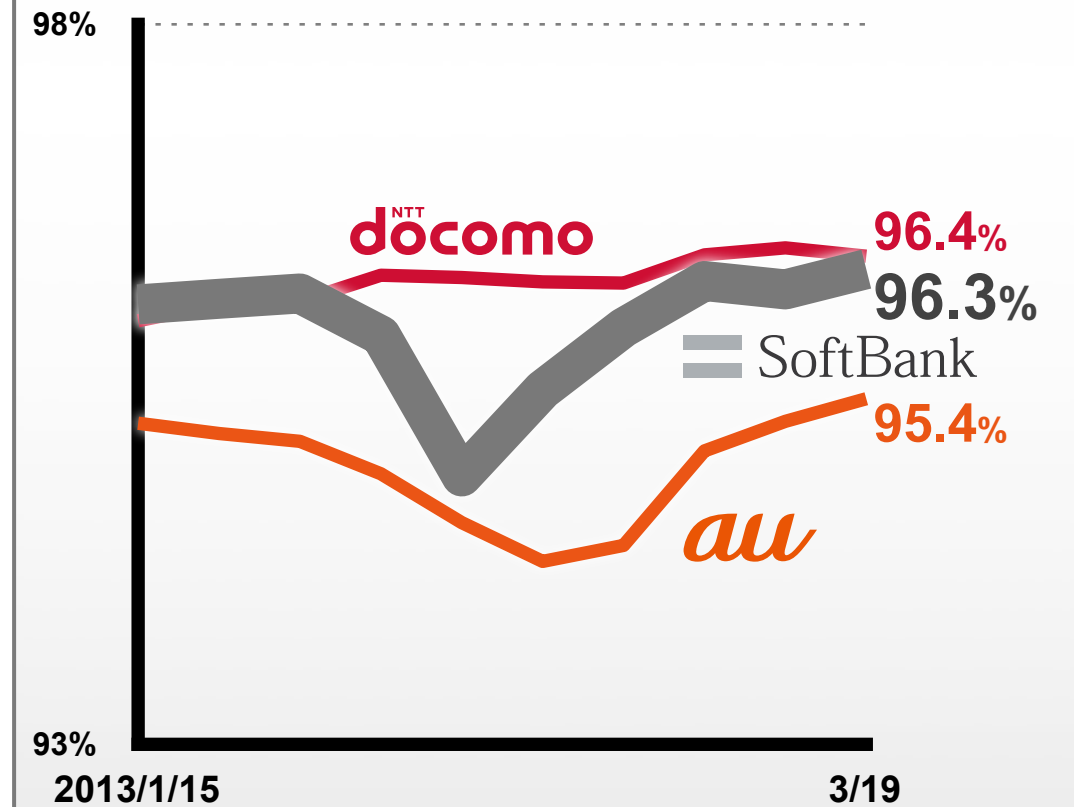
SoftBank is No.1



## Mountainous area



NTT DOCOMO is No.1



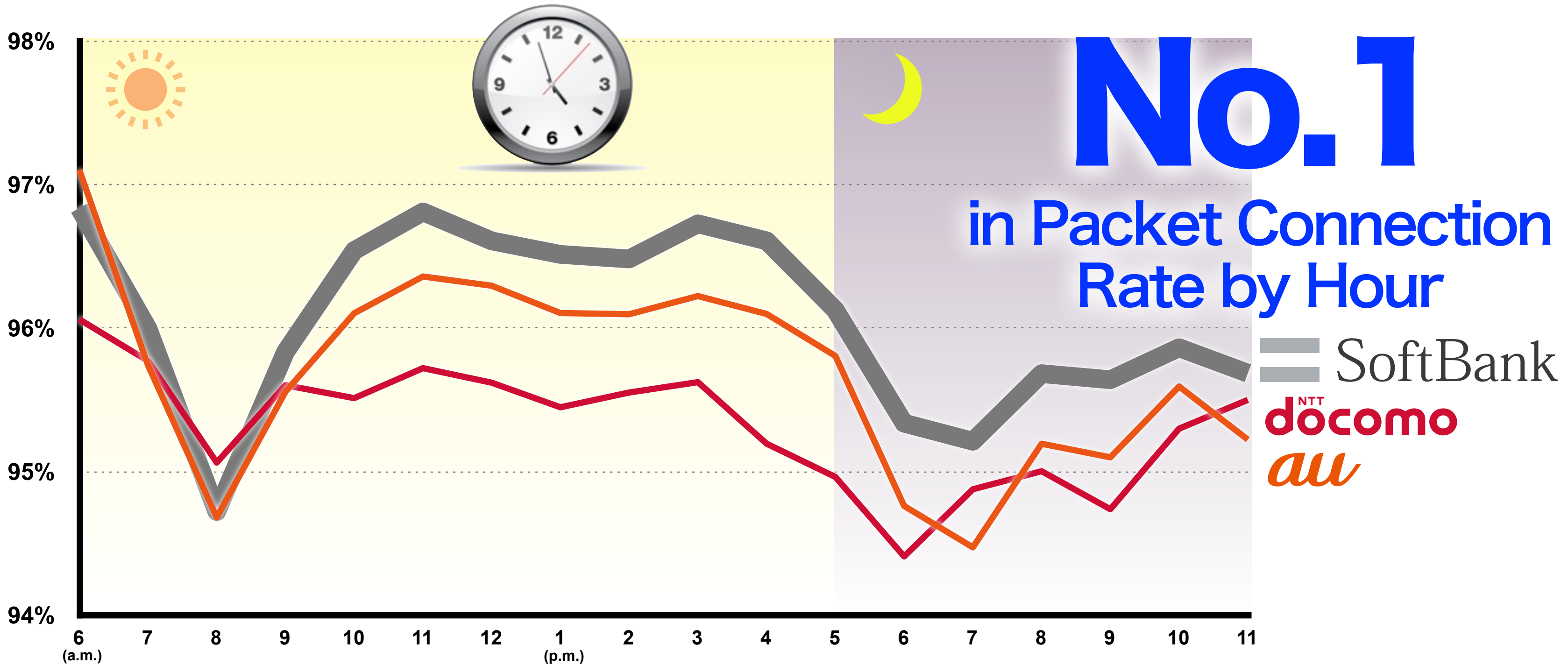
\*Statistics analyzed by Agoop Corp.

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Data of platinum band compatible smartphones was collected through the disaster warning app (by Yahoo Japan) and Ramen Checker app (by Agoop)

# Packet Connection Rate by Hour

(at top 1,000 railway stations by number commuters, platinum band-compatible smartphones)









\*Statistics analyzed by Agoop Corp.

Total 108,000 smartphones were randomly selected for analysis (SoftBank:36,000, NTT DOCOMO: 36,000, au:36,000) from February 15 to March 16. Data of platinum band compatible smartphones was collected through the disaster warning app (by Yahoo Japan) and Ramen Checker app (by Agoop)



# Packet Connection Rate by Landmark

Category	Number of locations	SoftBank	docomo	au
Railway station	1,000	 96.0%	95.3%	95.6%
University	100	 95.9%	95.4%	95.7%
Shopping mall	2,312	 96.3%	95.9%	95.8%
Department store	231	 95.7%	95.1%	95.2%
Electronics retail store	2,329	 96.5%	95.8%	95.8%
Convenience store	33,322	 96.6%	95.6%	95.9%










\*Railway station: top 1,000 by number of commuters      \*University: top 100 by number of students

\*Statistics analyzed by Agoop Corp.

Total 108,000 smartphones were randomly selected for analysis (SoftBank:36,000, NTT DOCOMO: 36,000, au:36,000) on March 12.

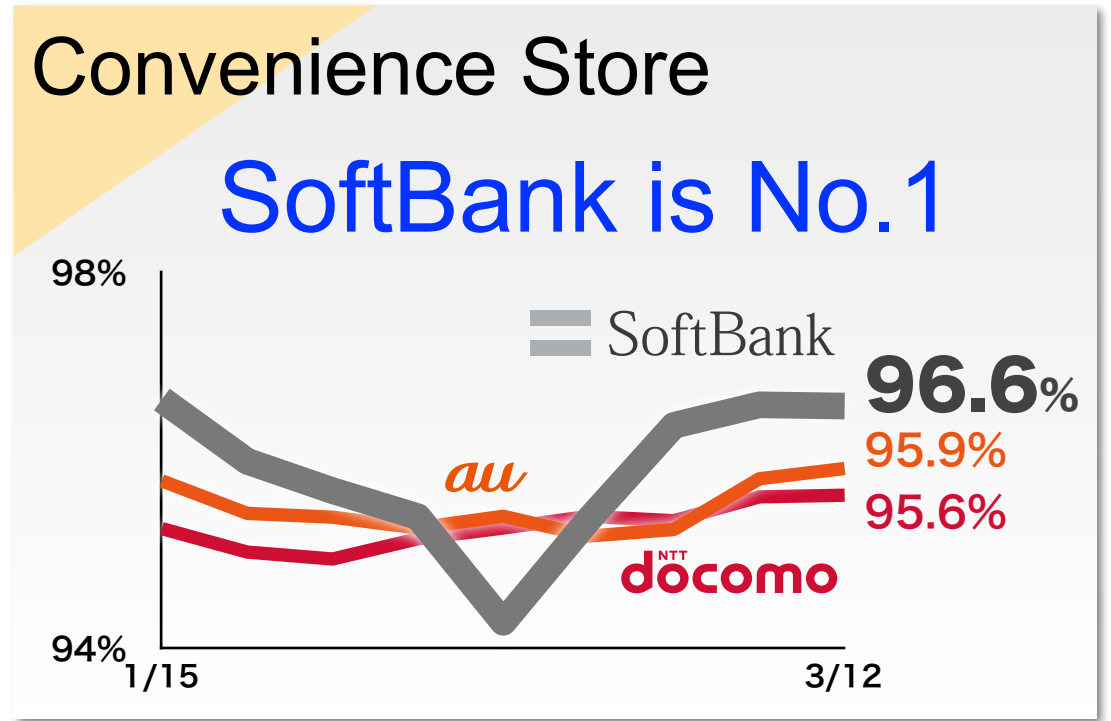
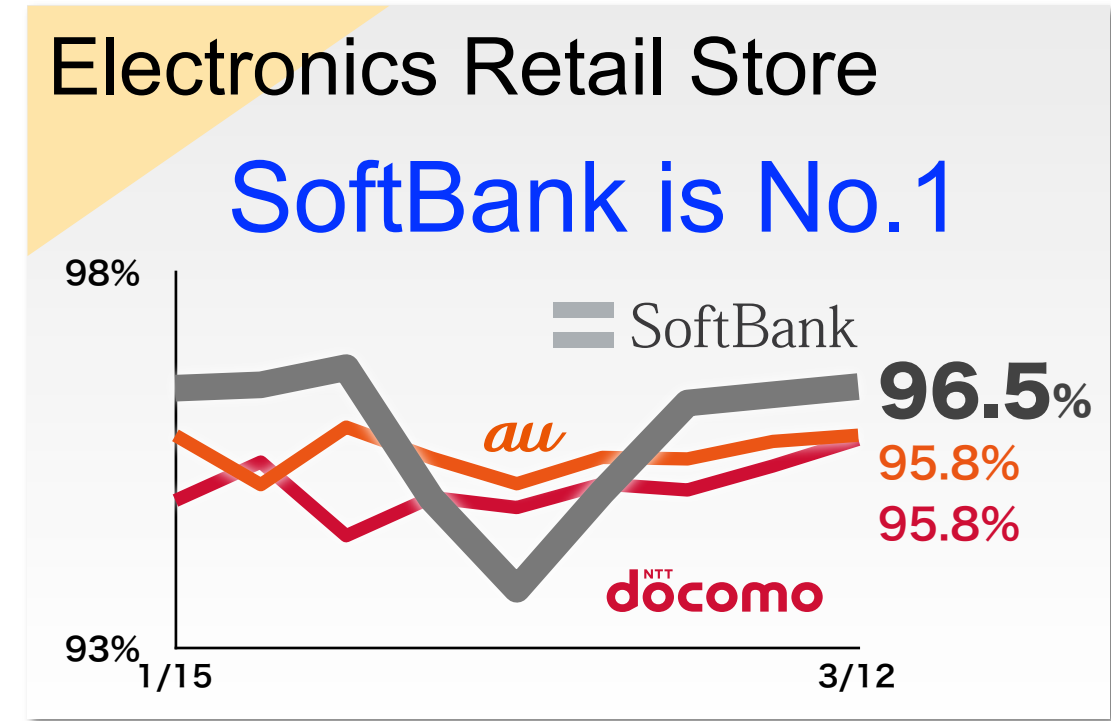
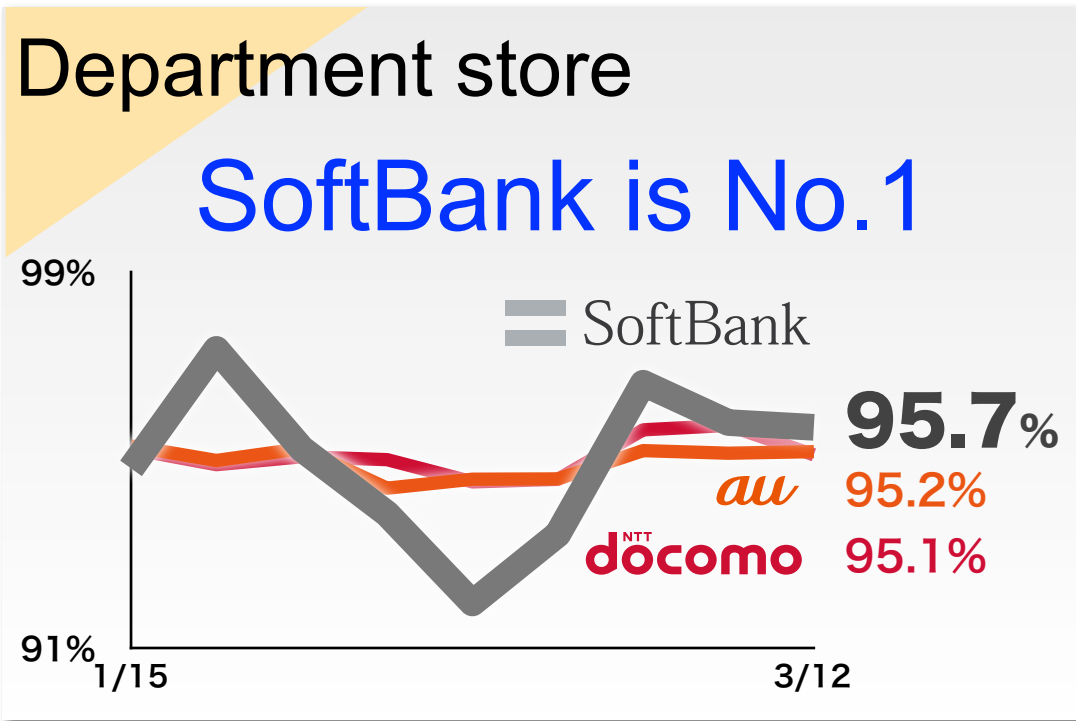
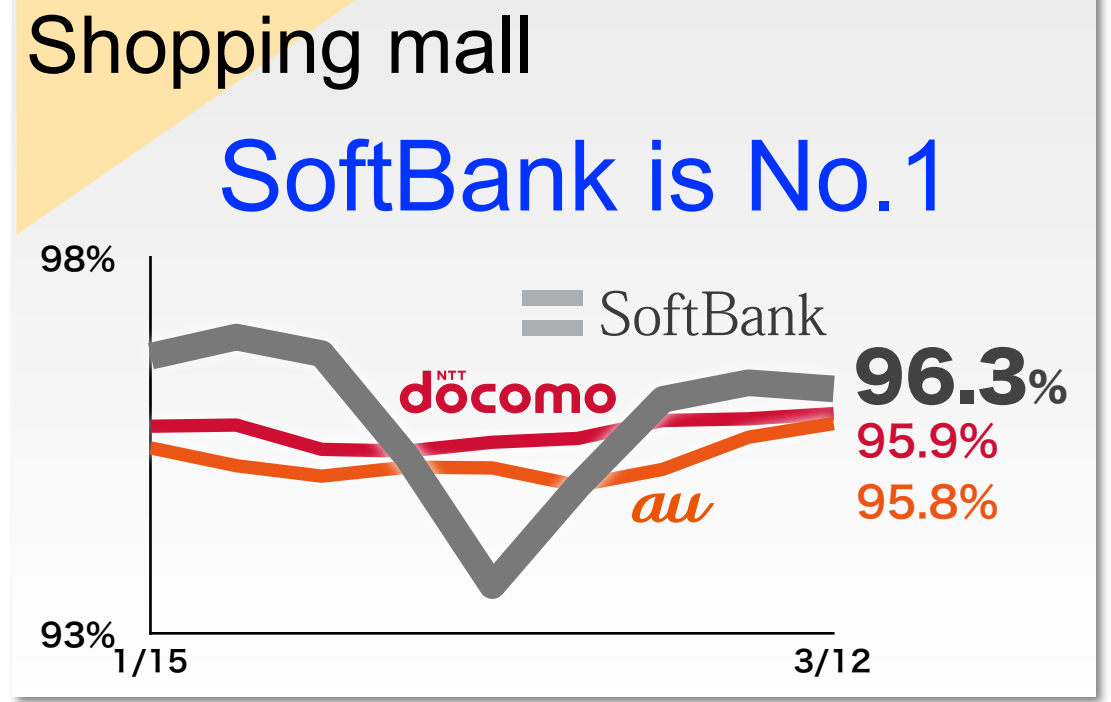
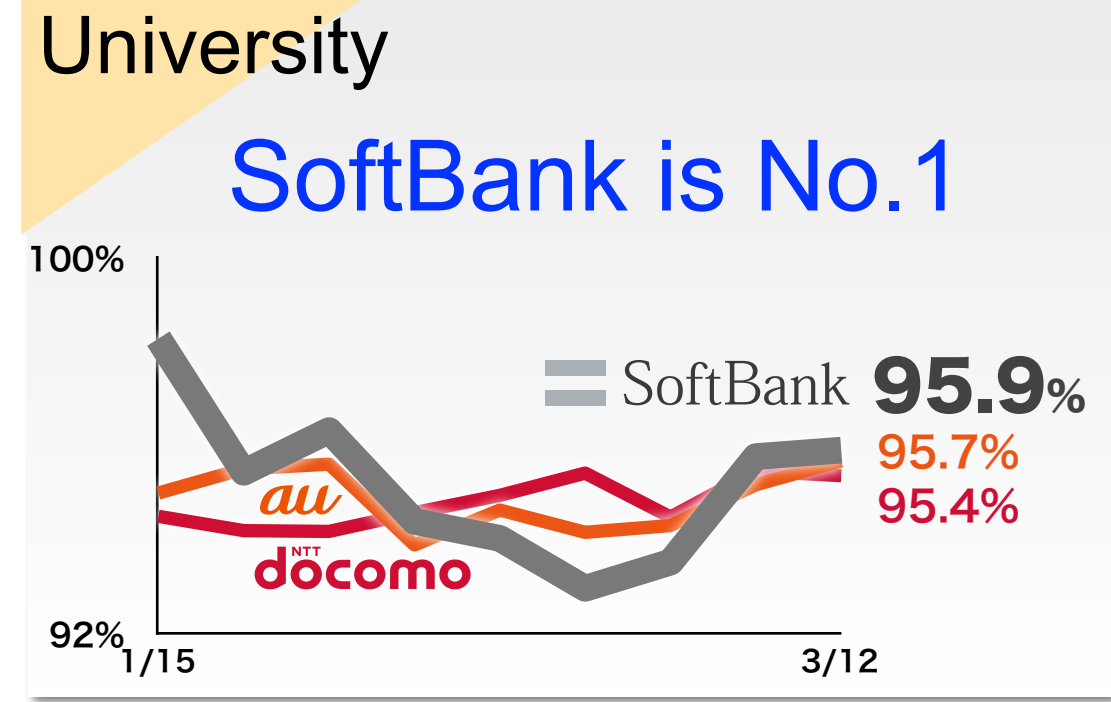
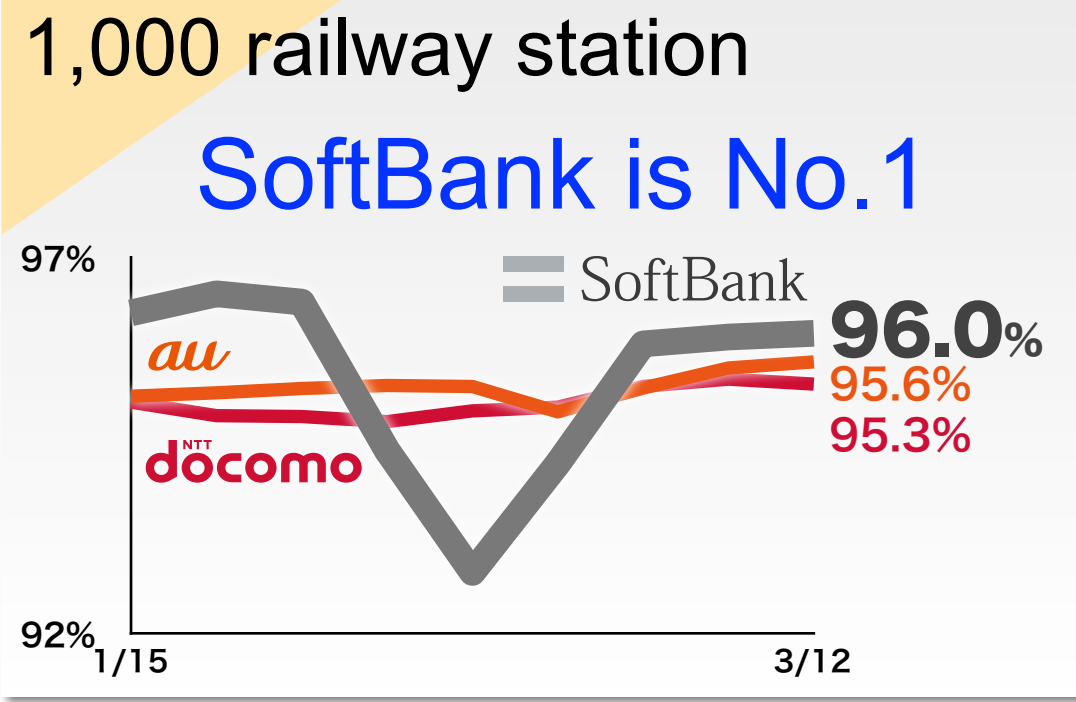
Data of platinum band compatible smartphones was collected through the disaster warning app (by Yahoo Japan) and Ramen Checker app (by Agoop)

# Packet Connection Rate by Landmark

Category	Number of locations	 SoftBank		
Express way rest area	749	 <b>97.3%</b>	97.2%	96.2%
Fast food eatery/ family-oriented restaurant	12,374	 <b>96.8%</b>	95.8%	96.1%
Hotel / inn	31,457	 <b>96.1%</b>	95.7%	95.7%
Theme park/ Leisure facility	1,071	 <b>95.8%</b>	95.2%	94.9%
Golf course	1,044	93.7%	 97.2%	95.0%
Ski resort	240	90.2%	 92.6%	91.8%

\*Statistics analyzed by Agoop Corp.  
 Total 108,000 smartphones were randomly selected for analysis (SoftBank:36,000, NTT DOCOMO: 36,000, au:36,000) on March 12.  
 Data of platinum band compatible smartphones was collected through the disaster warning app (by Yahoo Japan) and Ramen Checker app (by Agoop)

# Packet Connection Rate by Landmark



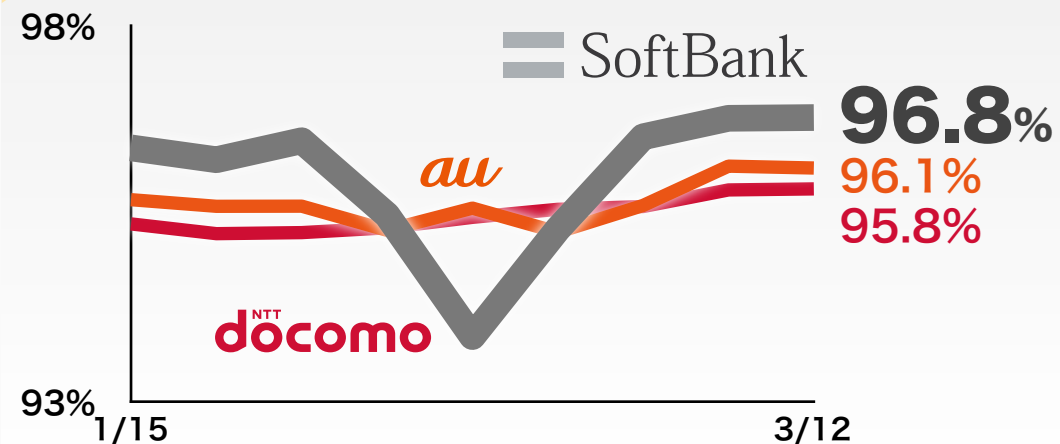
\*Statistics analyzed by Agoop Corp.  
 Total 108,000 smartphones were randomly selected for analysis (SoftBank:36,000, NTT DOCOMO: 36,000, au:36,000) from January 15 to March 12.  
 Data of platinum band compatible smartphones was collected through the disaster warning app (by Yahoo Japan) and Ramen Checker app (by Agoop)



# Packet Connection Rate by Landmark

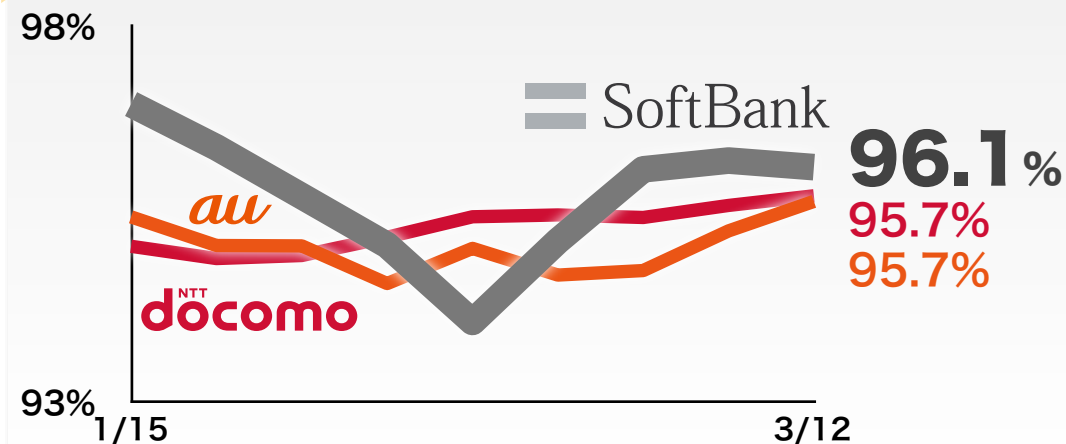
Fast food / family-oriented restaurant

SoftBank is No.1



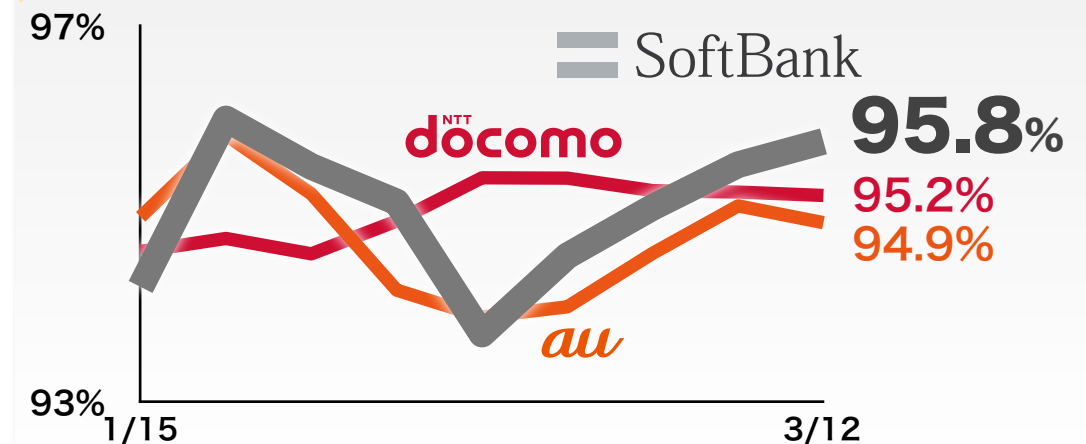
Hotel / inn

SoftBank is No.1



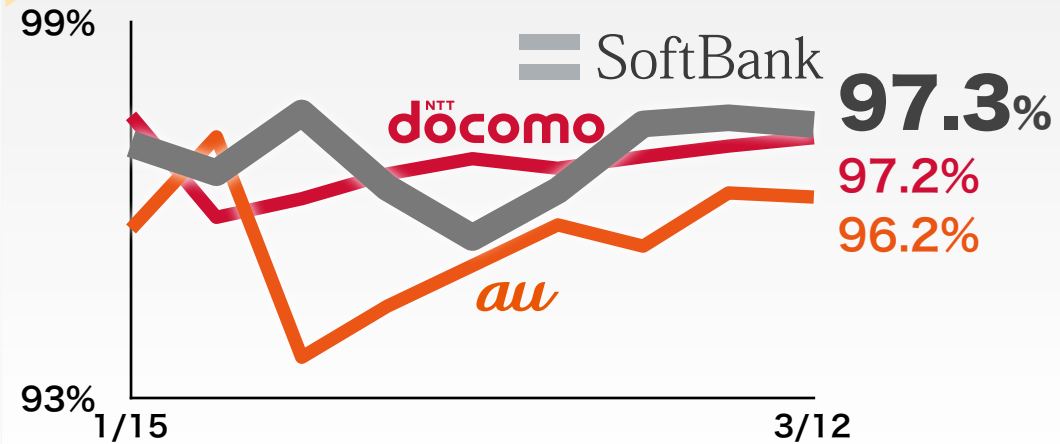
Leisure facility

SoftBank is No.1



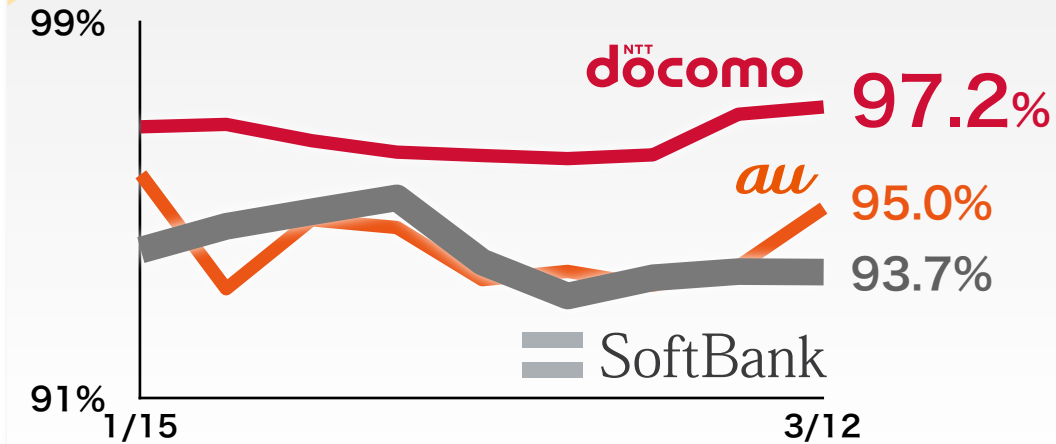
Express way rest area

SoftBank is No.1



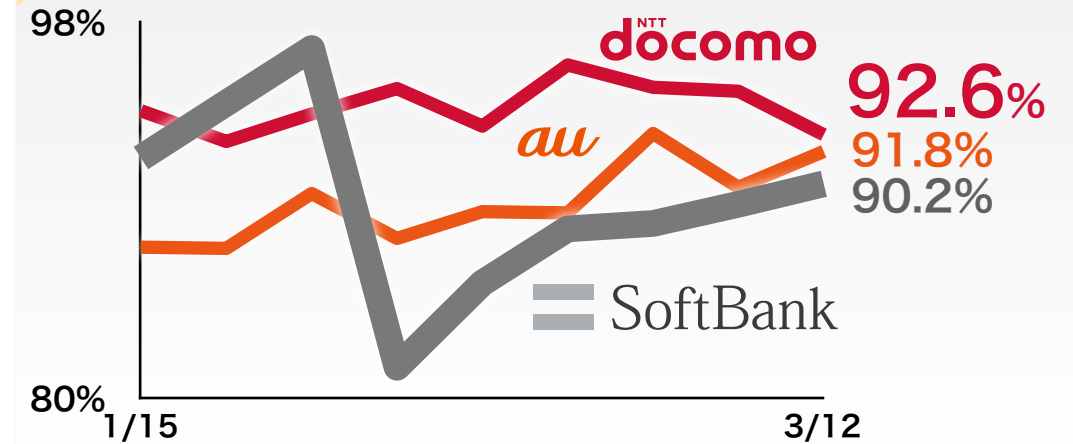
Golf course

NTT DOCOMO is No.1



Ski resort

NTT DOCOMO is No.1



\*Statistics analyzed by Agoop Corp.

Total 108,000 smartphones were randomly selected for analysis (SoftBank:36,000, NTT DOCOMO: 36,000, au:36,000) from January 15 to March 12.

Data of platinum band compatible smartphones was collected through the disaster warning app (by Yahoo Japan) and Ramen Checker app (by Agoop)

**We are No.1  
not by chance  
but by logic**

**We are not satisfied yet.**



# Video

# **Mission of Telecom Operator**





**Communications = Life line**







SoftBank