



Nissan Carwings connects driver to the world



Kenji Ikeura
Nissan Motor Co., Ltd.

"The Fully Networked Car, A Workshop on ICT in Vehicles"
ITU-T Geneva, 2-4 March 2005

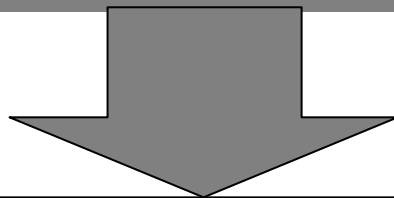


Objectives of this presentation



Current situation of Telematics

Automotive industry has actively worked on Telematics. However, no economic success has been achieved.



Objectives of the presentation

Find out

- **What we need to do**
- **What success we can have**

by referring to how Nissan deals with Telematics and mobile phones from an automotive viewpoint.



Nissan Corporate Vision



Corporate vision Enriching people's lives

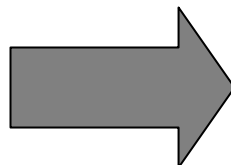
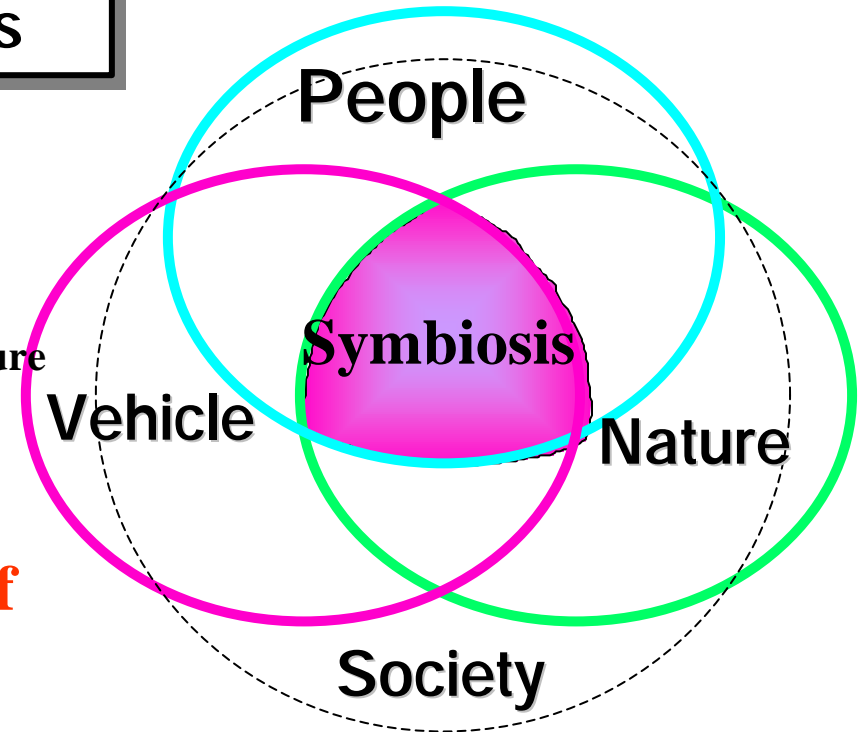
Environment policy

Symbiosis of people, vehicle and nature

Contribute to the development of a flourishing society by integrating "the heart" of conscious of people, society, nature and the earth into a vehicle design .

Target for Driving Safety

Reduce fatal and serious injuries by half



Pushing actively ITS/Telematics as a means to realize "Environment" and "Safe" concepts as well as boost products values.



Concept-1 Open model



Win-Win with open model



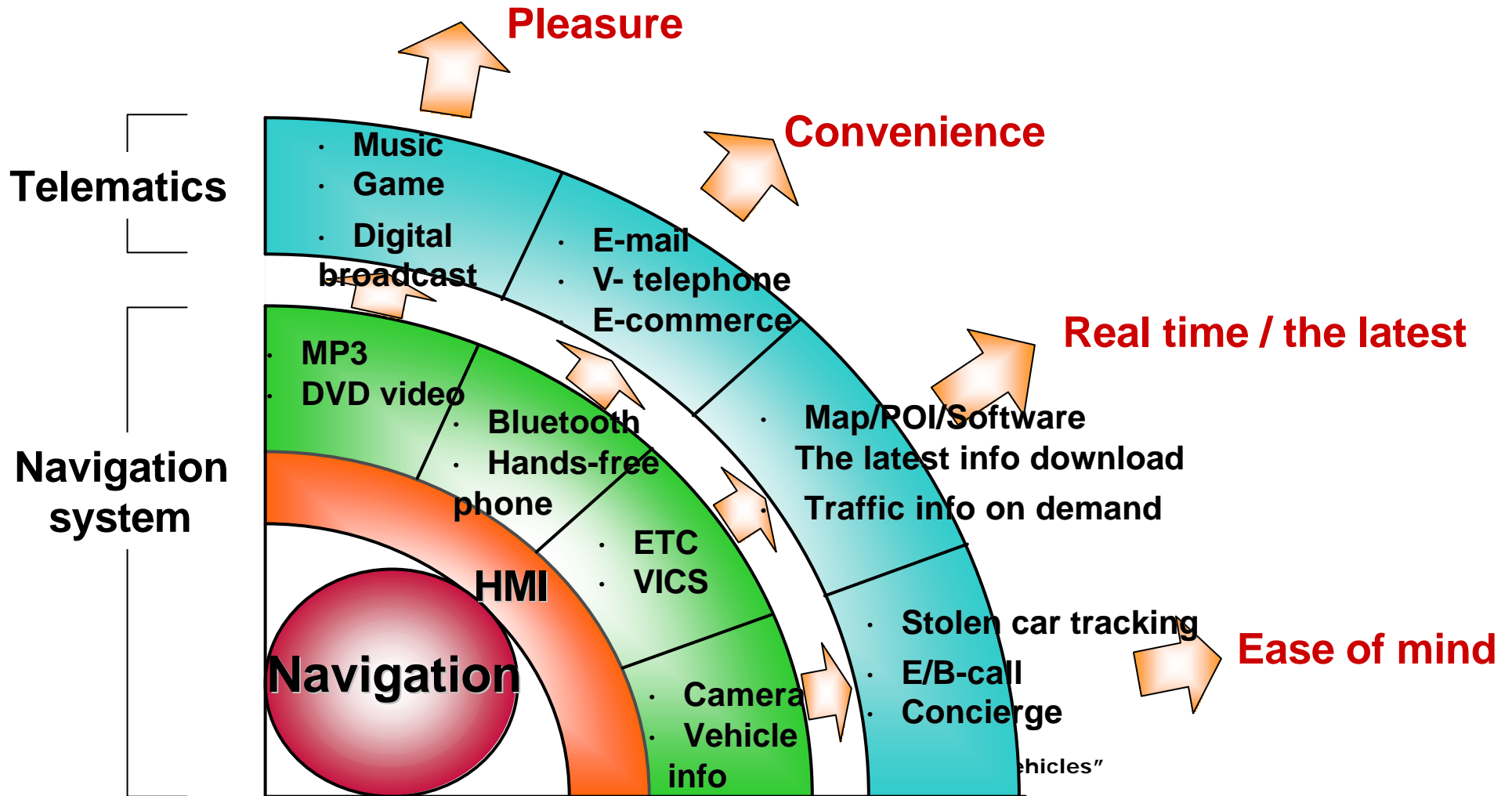
- Nissan's core business is "Vehicles"
- Nissan try to realize excellent Telematics services with good partners.



Concept-2 Expand navigation value



✓ Expand value of navigation by Telematics





Concept-3 Expand mobile phone value



✓ **Make your mobile phone more valuable in your vehicle**



- Hands-free telephone
- CARWINGS connection
- E-mail
- Telephone directory etc...

Bluetooth

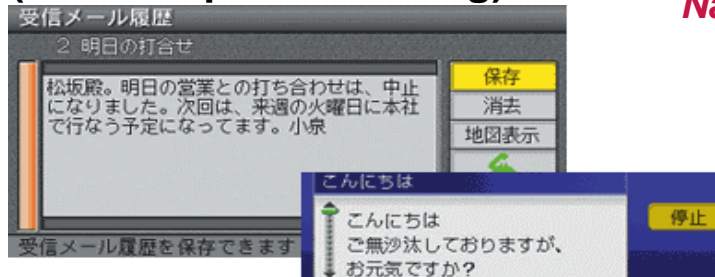




Services of Nissan CARWINGS



E-mail (Text-to-speech reading)



Drive plan (Destination setting)



Navigation with Telematics type



Traffic/Weather information



Hands-free phone



I am here mail

(vehicle location mail service)



Operator service

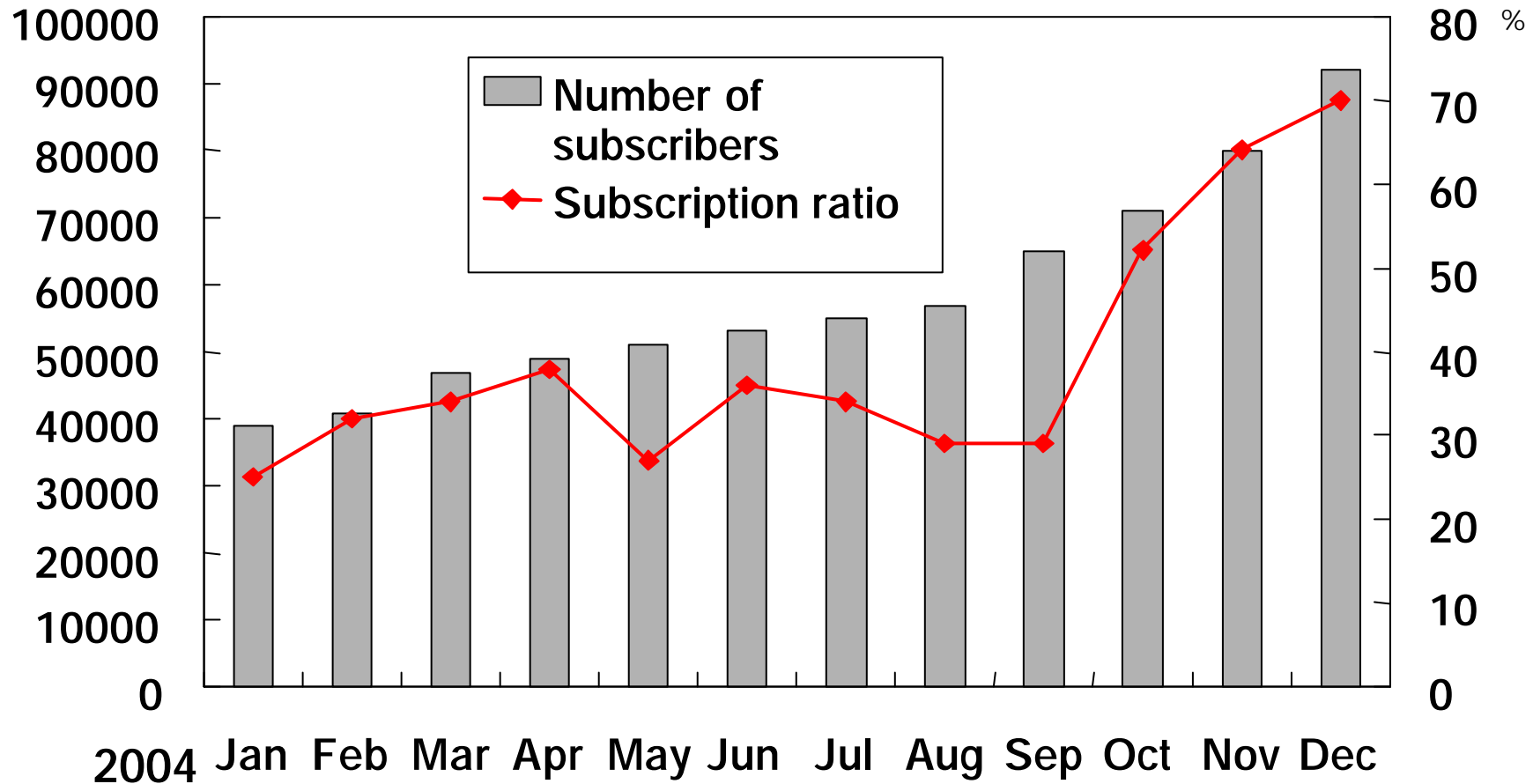


Nearest restaurant





CARWINGS Subscribers/Subscription ratio





How “CARWINGS” is used



✓ Driver focused services are accepted well

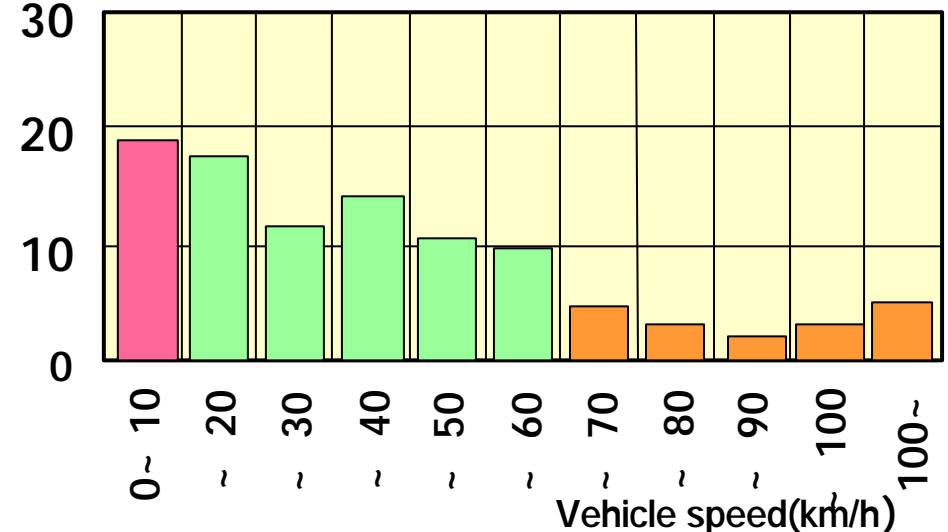
- Drivers use it most during a drive.
- Simple operation makes necessary (useful) info available for drivers.

Access ranking

- 1 . My channel (Bookmark, quick connection)
- 2 . Navigation system to destination
- 3 . Operator service
- 4 . Destination weather info
- 5 . The nearest restaurants
- 6 . I am hear mail (Related with a mobile phone)
- 7 . Info package about your location

- Main contents of Operator service
- Destination setting
 - Traffic info
 - Emergency call support (24hours)
 - Road service, Hospital.....
 - Auto DJ : Channel search engine

Ratio (%) Access rate by speed





Strength of Nissan Telematics



✓ “How drivers use Carwings” has been accumulated though 6 years of operation.

Operator service

Information available when you ask operators

One Push Operation

Information available by pressing a button once

Operator service



? AutoDJ? Direct call button



? AutoDJ? My channel (All your favorite info channels available)



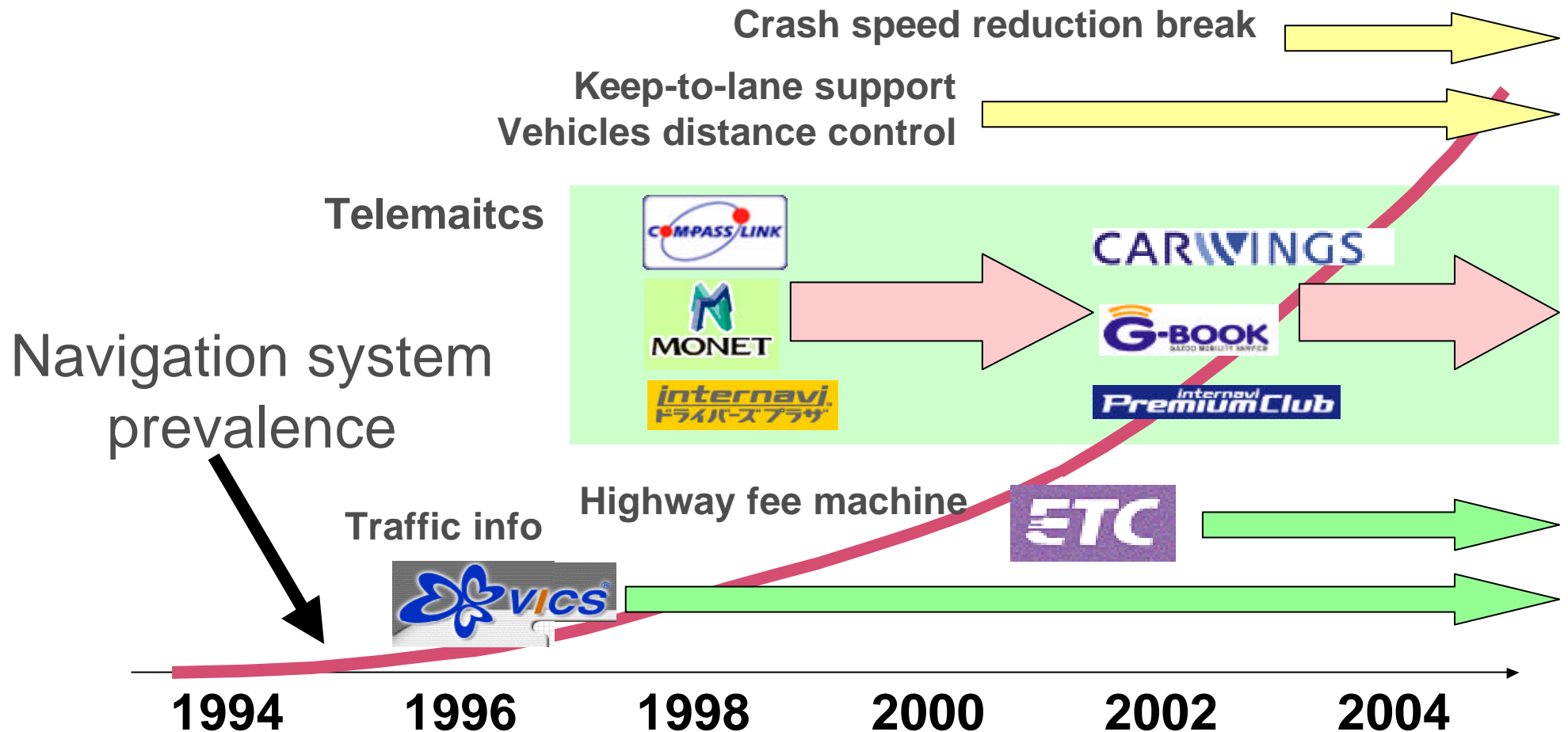
Button to call an operator



Telematics in Japan



✓ Nissan, Toyota and Honda are pushing ITS/Telematics forward

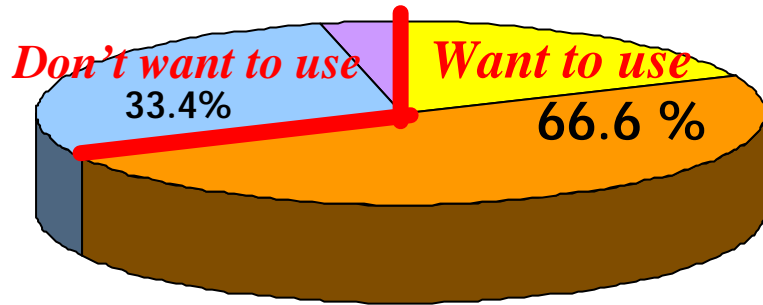




Customers' Expectations



Opinions on telematics in the future



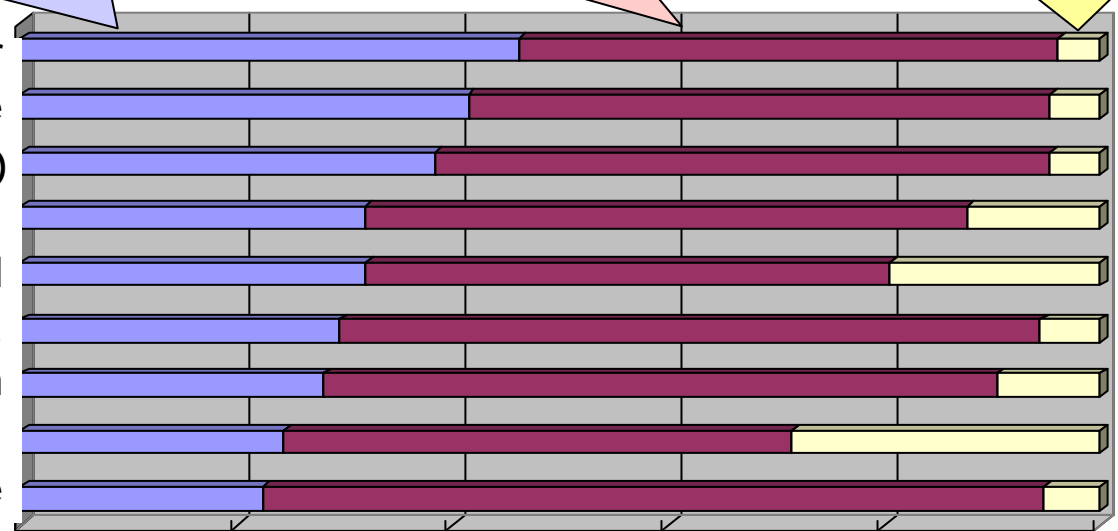
(N=10,4850) Source: Nikkei BP

✓ It's nice to have, but less customers are willing to pay

Opinions on telematics

I use one with charge I use one if it's free I don't need one.

- Locate a stolen car
- Car theft notice to your mobile phone
- Ask for help when emergency(MAYDAY)
- Download a latest map
- Unlock doors by a remote control
- Pedestrians info by IR camera
- Immediate service when Breakdown
- Identify an owner (IC tip etc...)
- Active instruction on a best trip route



Source: Yano Research Institute 2002 edition, I T S Telematics marketing forecast report



Challenges for Telematics



- ✓ More value by Less cost for customer
- ✓ Win-Win-Win model among Driver, mobile phone and Car

(1) More Value

- Easy and seamless connection among Driver, mobile phone, Car and the internet world through standardized “seven layers”.
- Synchronized database among Car, mobile phone, own PC and internet world to realize “The Fully Networked car”.

(2) Less Cost

- Affordable charge for airtime and services.
- Single Contract for Seamless connection.

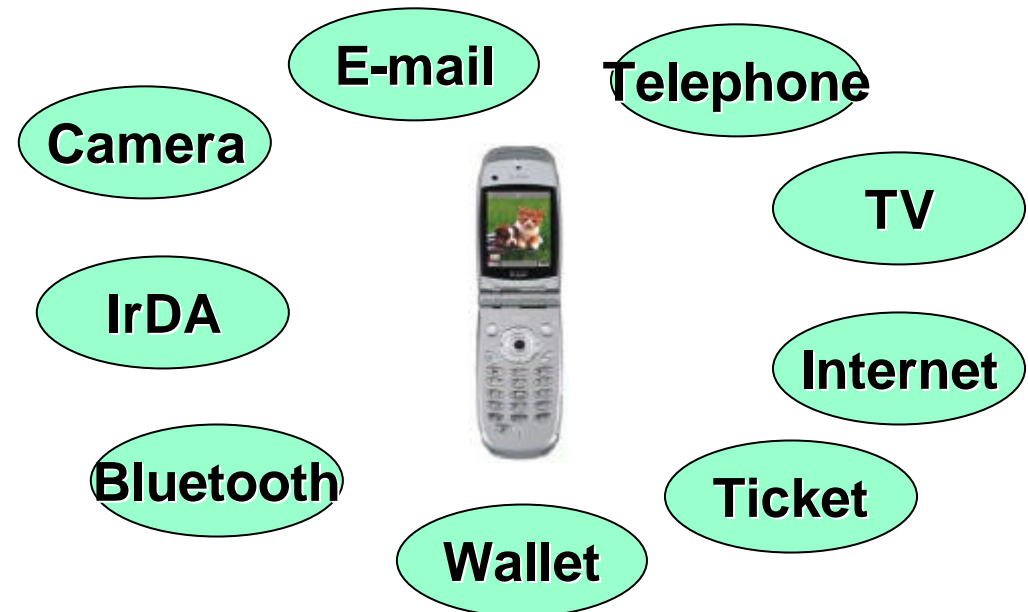


Mobile phone realizes Ubiquitous



- ✓ Mobile phone is,
 - Basic tool to access People, Music, personal database, and internet world
 - A part of yourself (ID of yourself, another wallet. . .)

- Accessible to any information
- Seamless connection available 24 hours a day, 365 days a year, and anywhere you are.
- ID and account of individuals





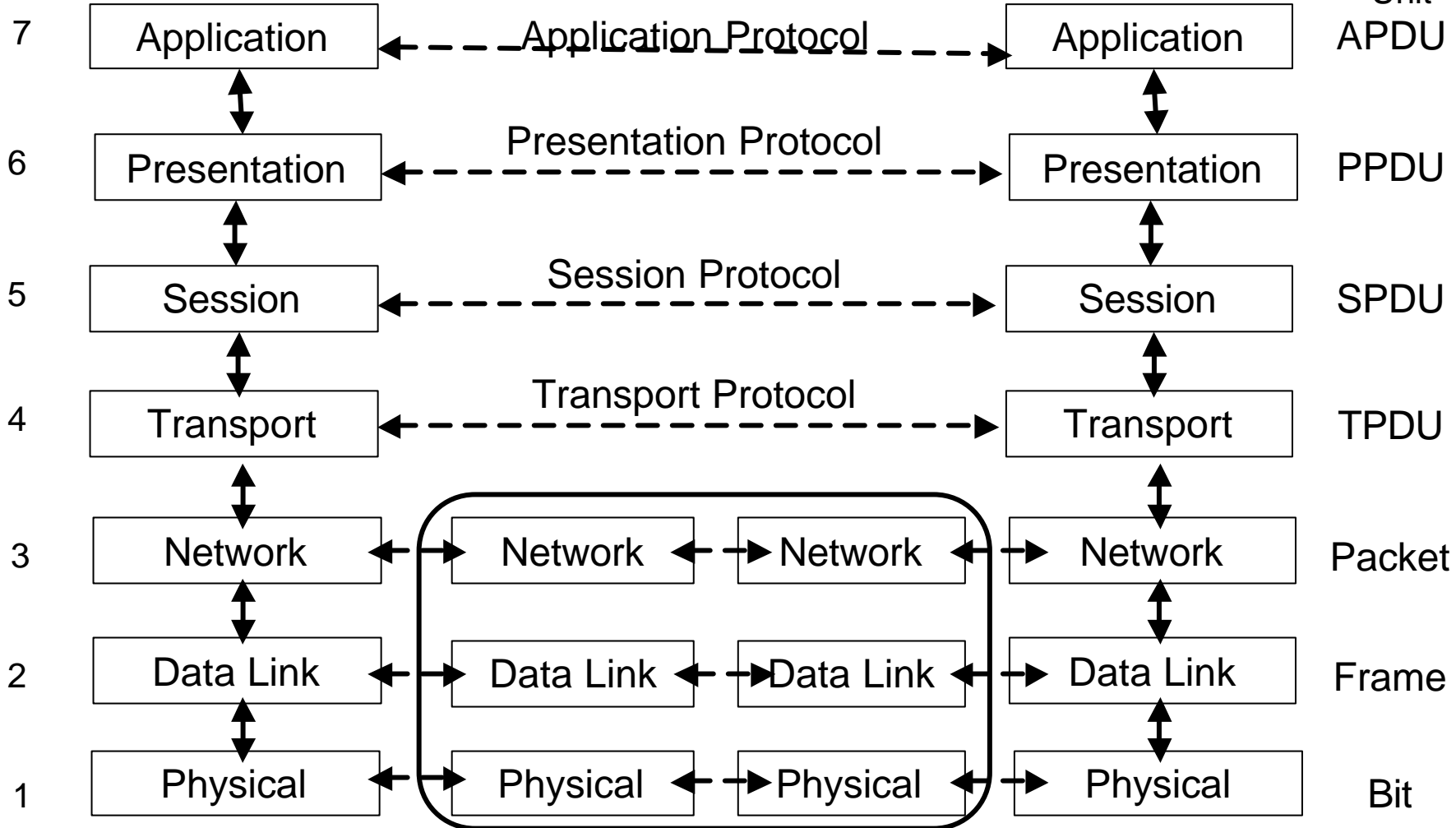
Seven Layers compatibility



Layer

Network architecture based on the OSI model

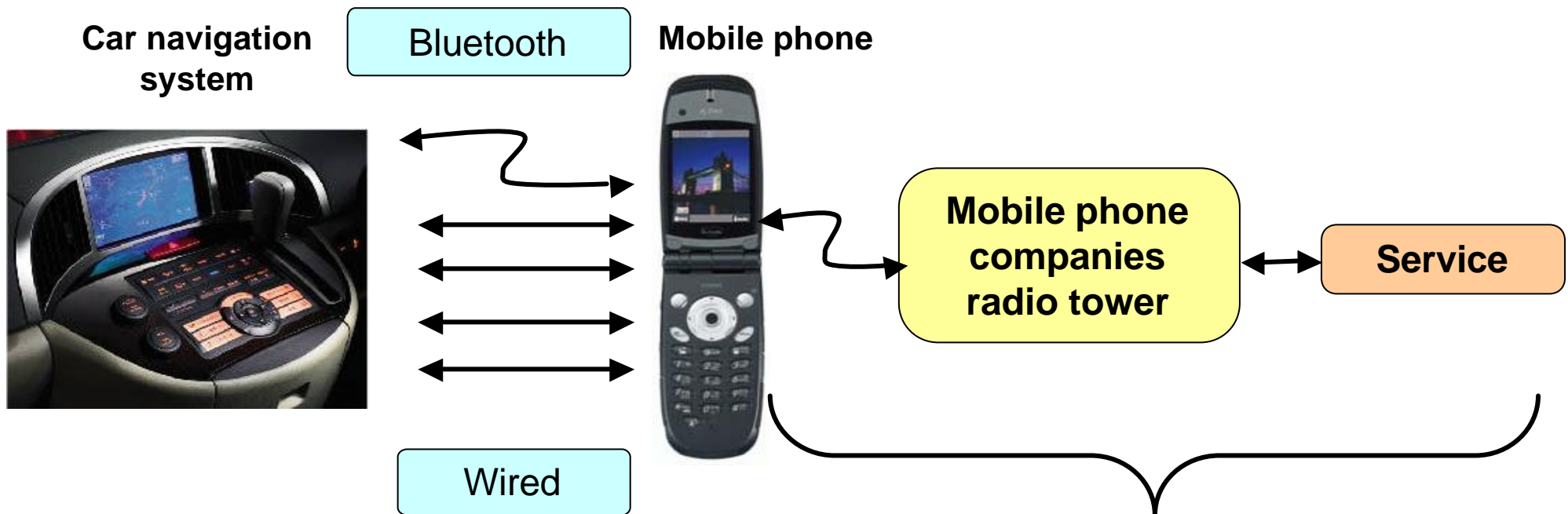
Exchange Unit





Facts of connectivity

✓ It is not easy to guarantee physical connection



Nissan prepares 4 wires to customer
It makes 80% cell phone possible to connect
 It is far better than the situation in US

???



Commonization among automakers



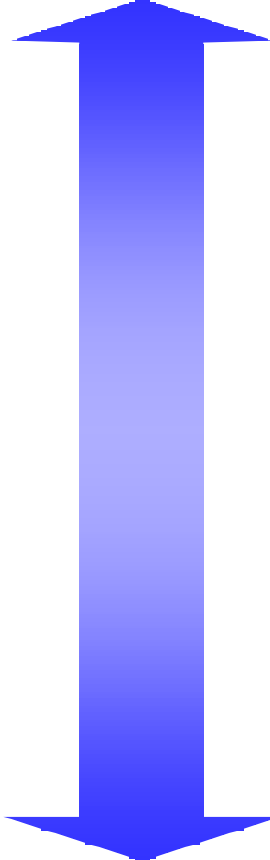
✓ Seek for a scale effect by commonization

Commonization

Seek for a scale effect in cooperation with partners and other OEMs.
(Increase the number of members)

Differentiation

Pursue the originality as OEM maker

- 
- Basic parts of on-board equipment (processor, DVD, etc)
 - Development of basic software
 - Voice recognition
 - On-board communication unit
 - Communication/carrier services
 - General contents
 - Portal infrastructure
 - Billing, certification and settlement
 - Call center, agent service
 - e-CRM (Utilization of customer and vehicle information)
 - Vehicle inherent contents
 - Vehicle related portals
 - HMI

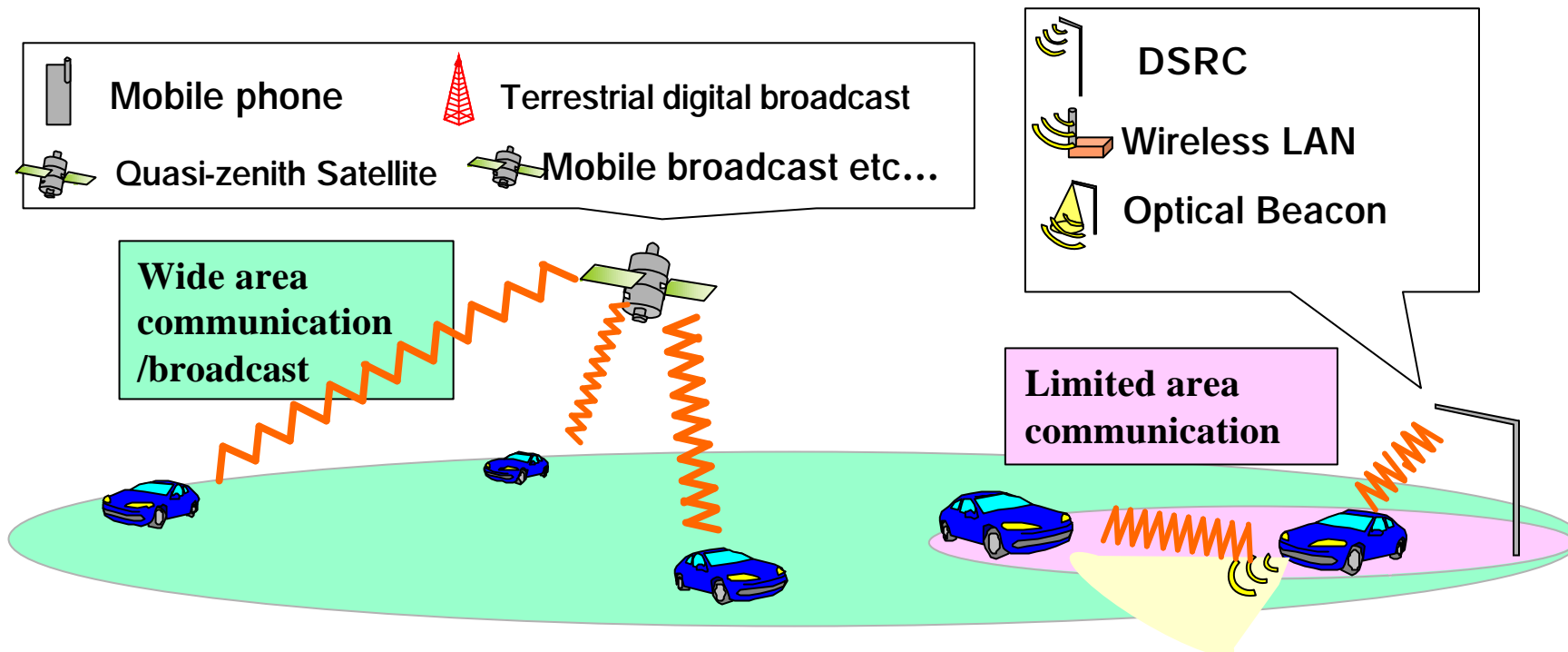


Telematics and communication



✓ More diversity of communication infrastructure is coming.
What is suitable to what? Is it possible to catch the change up?

- Life cycle is different between vehicle and communication devices
- Each transceiver needs own device and contract. It cause much cost.



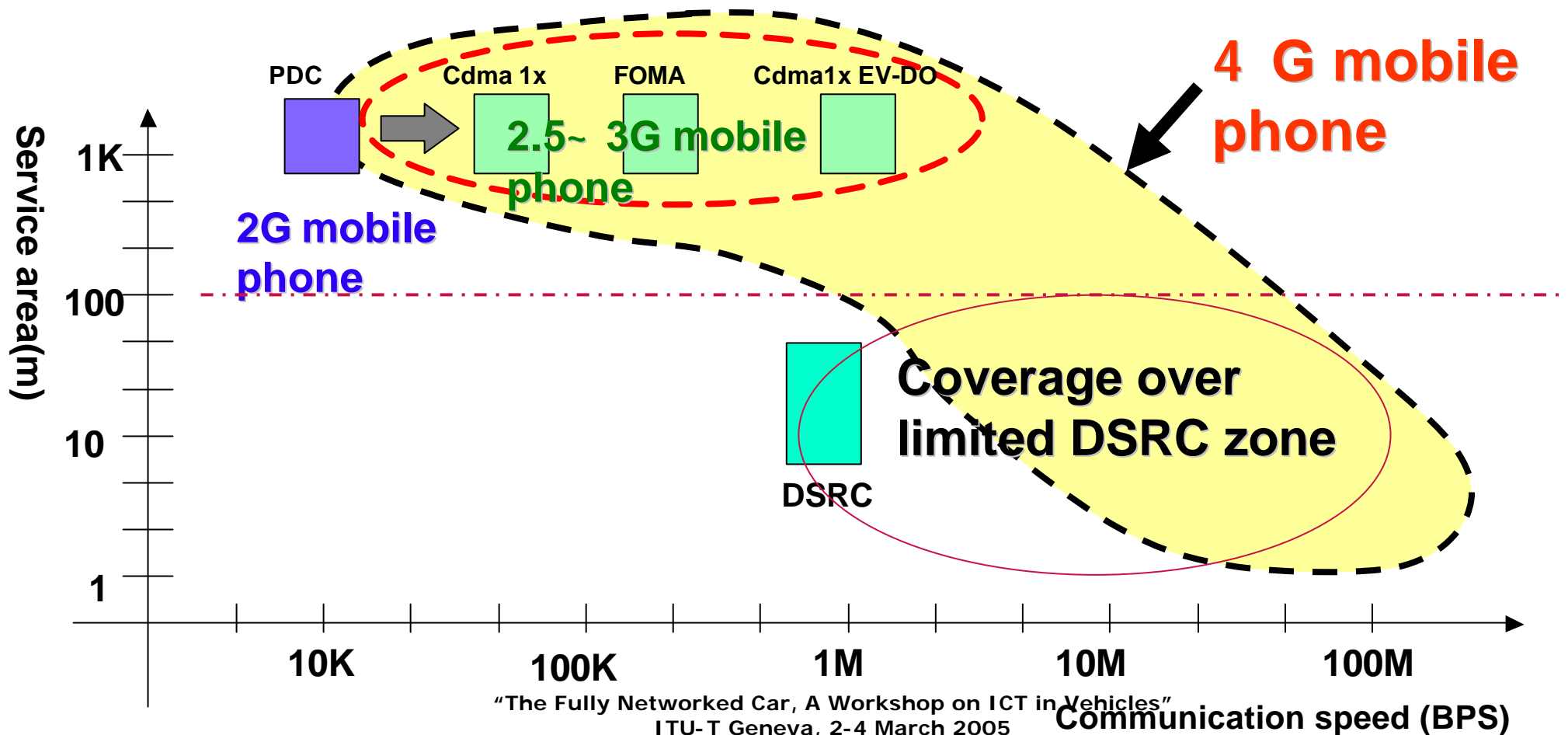
DSRC(Dedicated Short Range Communication): Communication between vehicles on exclusive drivers roads/Communication medium for vehicles. It is applied to ETC.



Could 4G mobile phone be messiah?



✓ Next generation mobile phone may have powerful ability
Is it possible to realize “plug and play” capability?





Conclusion

- 1. More value with less cost for customer is essential for growth of Telematics.**
- 2. Open model, Enhanced Car Navigation System and Greater power of customer's mobile phone are three policies of Nissan to build affordable and valuable Telematics.**
- 3. Nissan is focusing on "Driving related Services". Other services could be common among car makers and service providers.**
- 4. Mobile phone is bringing Ubiquitous and seamless connection. It is becoming a part of personality now.**
- 5. Standardized connectivity is essentially required for customer's usability. All seven layers has problems in compatibility.**
- 6. Win-Win-Win relation among User, mobile phone and Car is the key factor to success. We have to make clear perception about what could be common and what must be competition.**

A blurred background image of a person wearing glasses and a dark shirt, with the text "Thank you" overlaid in the center.

Thank you