

1st OMEGA Open Event 2009

**The current situation of Japanese
home networks and the new topic of POF**

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AS Business Partners Co., LTD

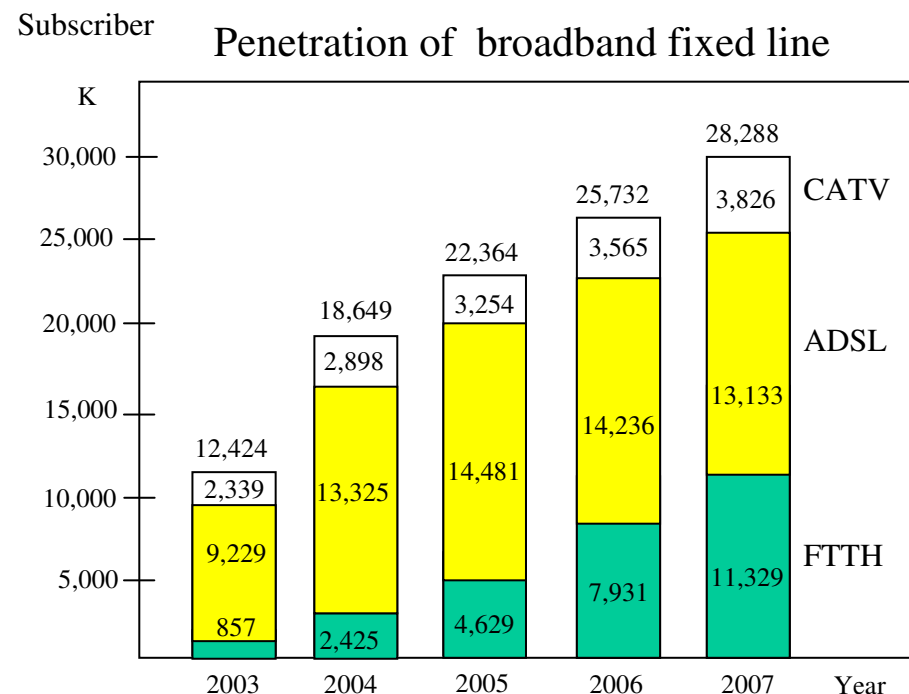
Homefibre GmbH

Home networks

1. Topics of Japanese broadband network

- The penetration rate of the broadband fixed line (10Mbps~) is around 62%.
- The number of FTTH user is more than 11M. The growing rate of FTTH has exceeded that of ADSL in mid 2006.

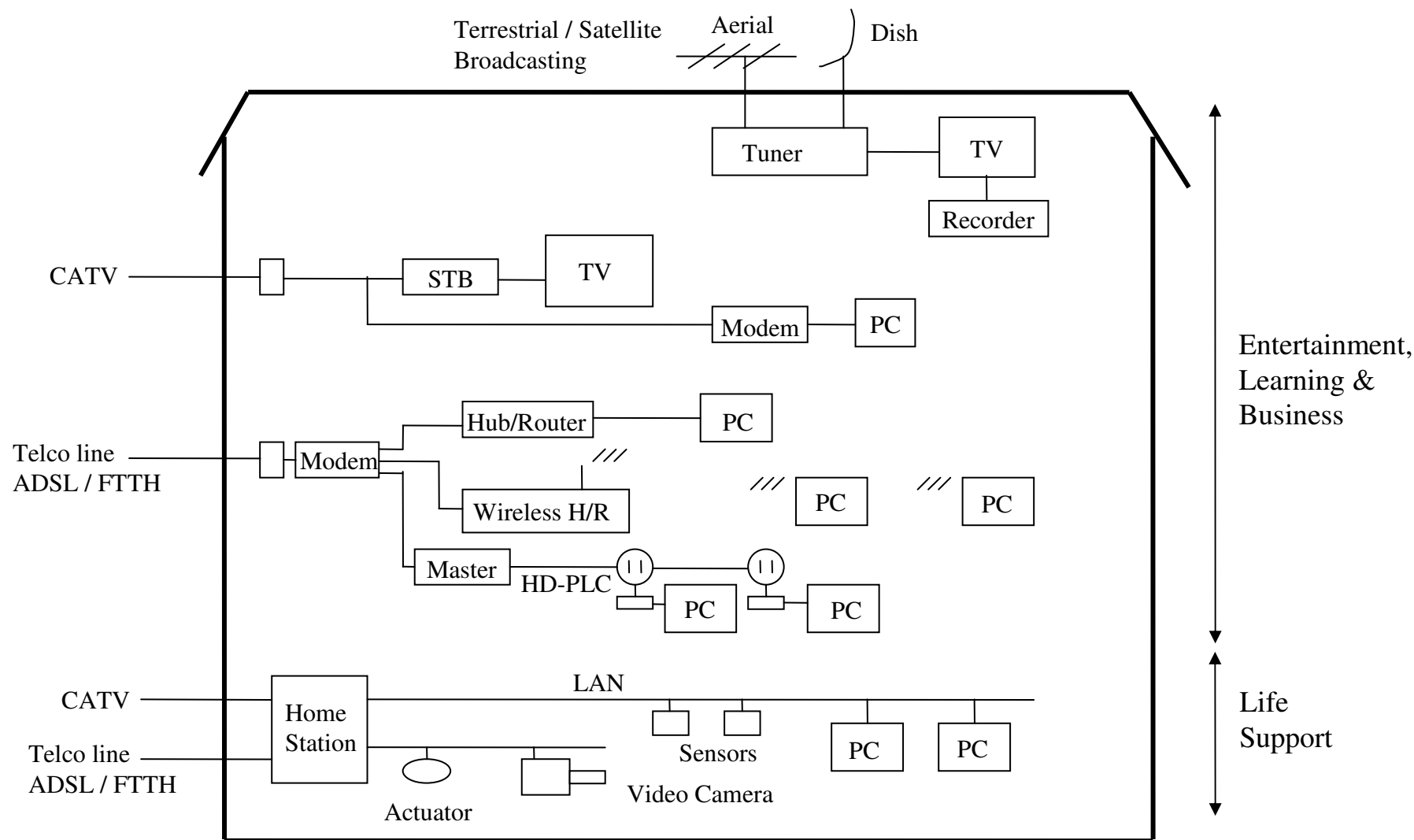
- Digital TV broadcasting started in 2003 and analog TV will terminate in July, 2011.
- CATV market grows steadily and gets more than 25M subscribers. But satellite broadcasting is weak.



- The penetration rate of mobile phone is about 85% (≒ 101M users).
- The new broadband mobile service (3.9G) started prior to the world standard 4G.
- Digital TV broadcasting for mobile equipments started in 2007. This service is named as “ONESEG” (1 of 13 segments of digital TV bandwidth is used for mobile).

Japanese population is around 120,000k. The number of Japanese households is around 45,000k.

2. The connection model of home network



3. Comparison of today's home networking solutions

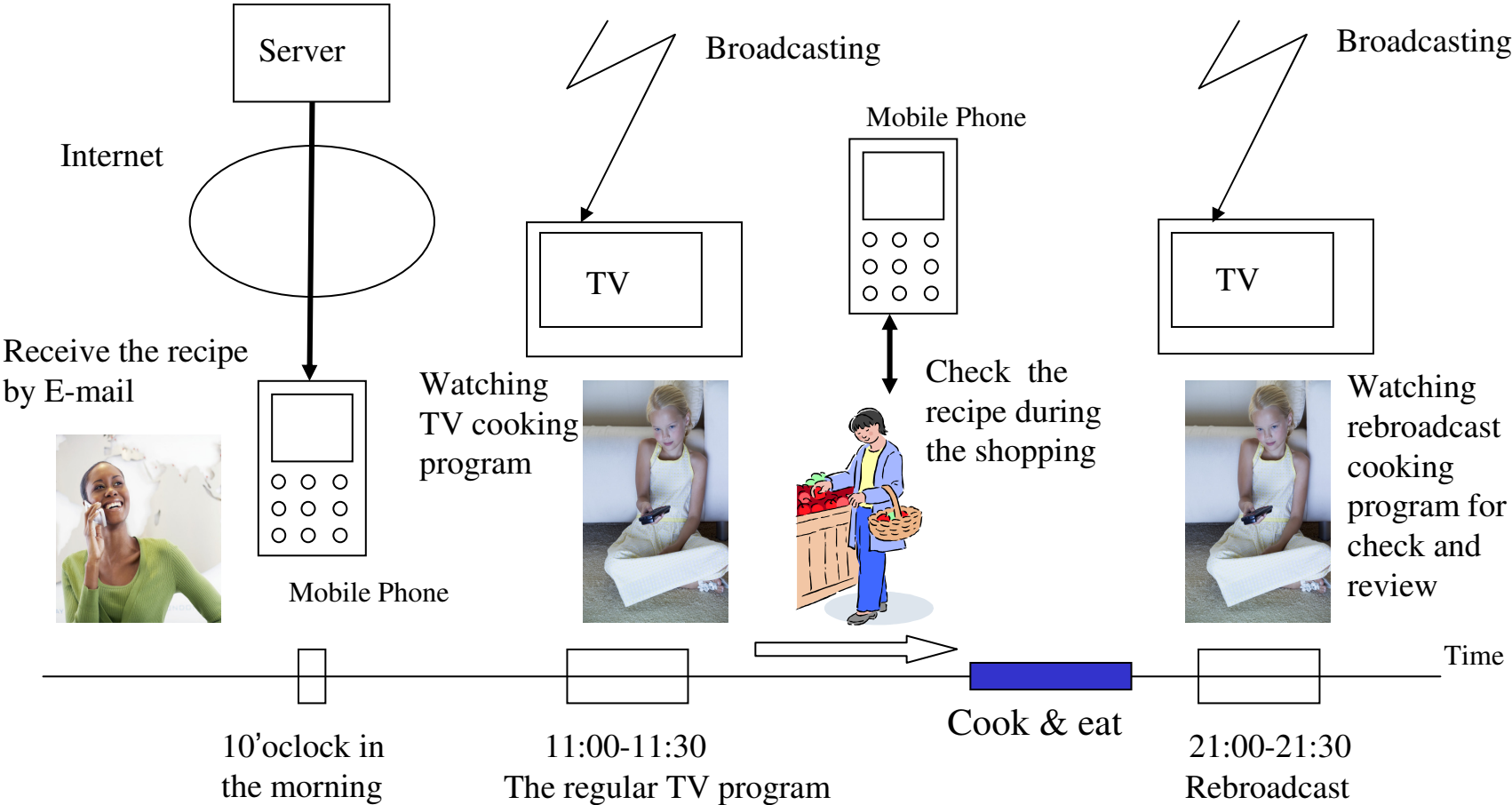
Category	Advantage	Disadvantage	Situation in Japan
Wireless	<ul style="list-style-type: none"> ▪ Space / Easy installation ▪ Speed 50~150Mbps 	<ul style="list-style-type: none"> ▪ Interference ▪ Security 	<ul style="list-style-type: none"> ▪ High penetration rate ▪ Major manufacturers of wireless router : BUFFALO, Corega, NEC
Coaxial Cable	<ul style="list-style-type: none"> ▪ Installation by CATV operator ▪ Services: TV / Internet / Telephone ▪ Speed 30~100Mbps 	<ul style="list-style-type: none"> ▪ Larger diameter ▪ Bandwidth is not enough for the future 	<ul style="list-style-type: none"> ▪ 25M+ households ▪ Major manufacturers of cable modem : Cisco, Motorola
Powerline, PLC	<ul style="list-style-type: none"> ▪ Convenient electric power supply & data ▪ Speed 50~150Mbps 	<ul style="list-style-type: none"> ▪ Interference ▪ Speed 	<ul style="list-style-type: none"> ▪ Development progressing steadily but no big deployment ▪ Major manufacturers: Panasonic, BUFFALO
LAN Cable (CAT5/6)	<ul style="list-style-type: none"> ▪ Convenient extension of LAN in a room ▪ Speed ~1Gbps 	<ul style="list-style-type: none"> ▪ Larger diameter ▪ Not suitable for bundle within a house 	<ul style="list-style-type: none"> ▪ acTVila Standardized by Panasonic, Sharp, SONY, Toshiba, Hitachi direct connection of LAN cable to TV
POF	<ul style="list-style-type: none"> ▪ Smaller diameter ▪ Easy installation 	<ul style="list-style-type: none"> ▪ Distance ▪ Speed 	<ul style="list-style-type: none"> ▪ Very few installation in households ▪ Major manufacturer: Mitsubishi Rayon

4. Examples of services and applications of home network

Entertainment, Learning & Business	TV	<ul style="list-style-type: none"> ▪ High definition TV program with high quality sound ▪ VOD ▪ Interactive TV: shopping, auction, audience participating programs etc.
	Games	<ul style="list-style-type: none"> ▪ Network games with multiple-participants
	E-learning with visual assistance	
	Visual communication with friends and partners	
	Home digital archive center	
	SOHO support services	
	Life support	Monitoring
Control		air conditioning, light
Security		door lock, window lock
Emergency		intruder, fire, life alarm from family members
Visual communication with parents and children		

5. Interaction between mobile phone and TV broadcasting

Here is a "cooking show" example of interaction between mobile phone and TV broadcasting. This service started in January, 2008 by NHK with free of charge.



6. Watching the missed TV broadcasting program

The NHK started a new service called "The missed TV program watching service" from last December. We can see the program broadcasted up to one week before by internet at the expense of €1-3 per program.

