
Project: IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)

Submission Title: [Regarding the definition of PSC]

Date Submitted: [20 May 2010]

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Re: [For the consensus on the definition of the term, PSC]

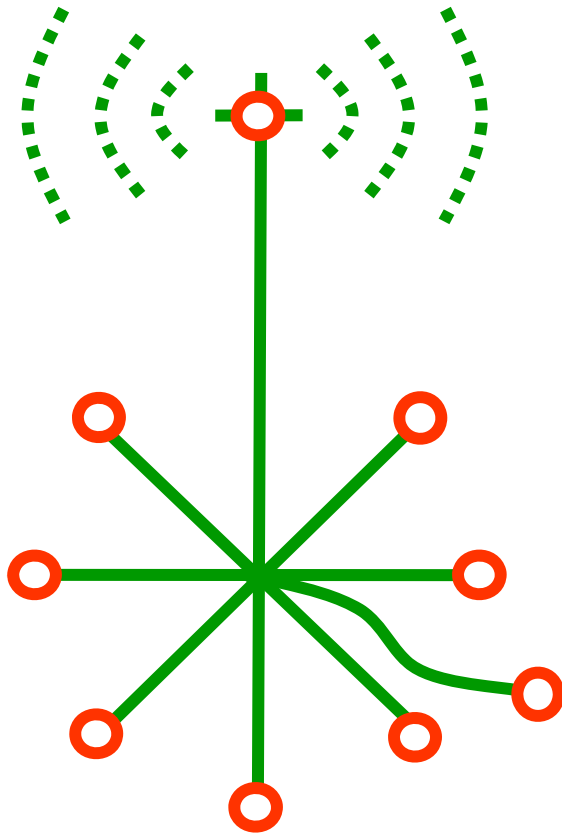
Abstract: [We always need to remind the common objectives of WPANs. If WPAN technologies are resulted from practical concerns about the explosively increasing capacity requirement at the last mile of the existing service networks, the final goal of the SG-PSC is accordingly to clarify 'what is the PSC' and to make some consensus on 'what to do eventually with PSC technology.' The summary of those clarification and consensus would be the scope of the proposed standard or a reflection of the PAR.]

Purpose: [To clarify terms relevant with SG and to search common objectives to cooperate with members in current meetings]

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Regarding the Definition of PSC



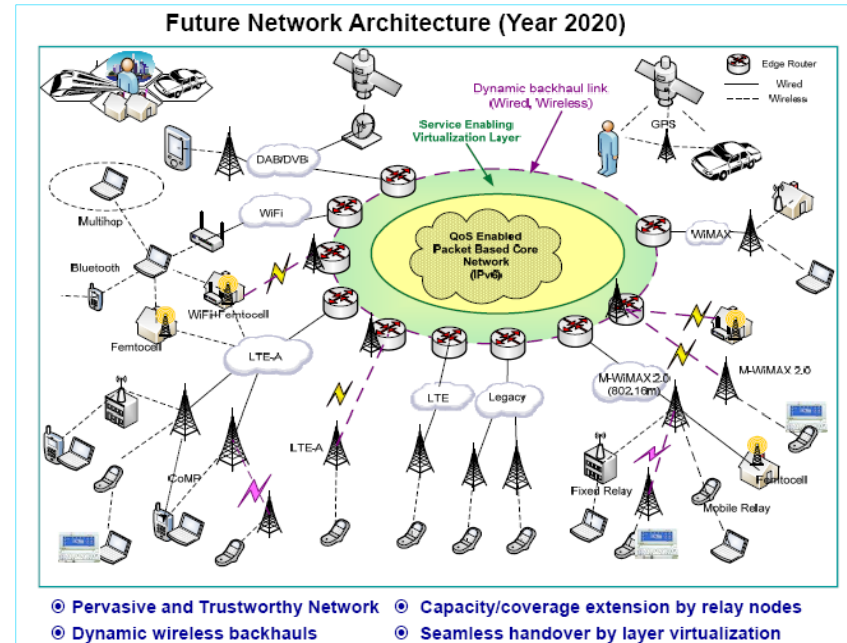
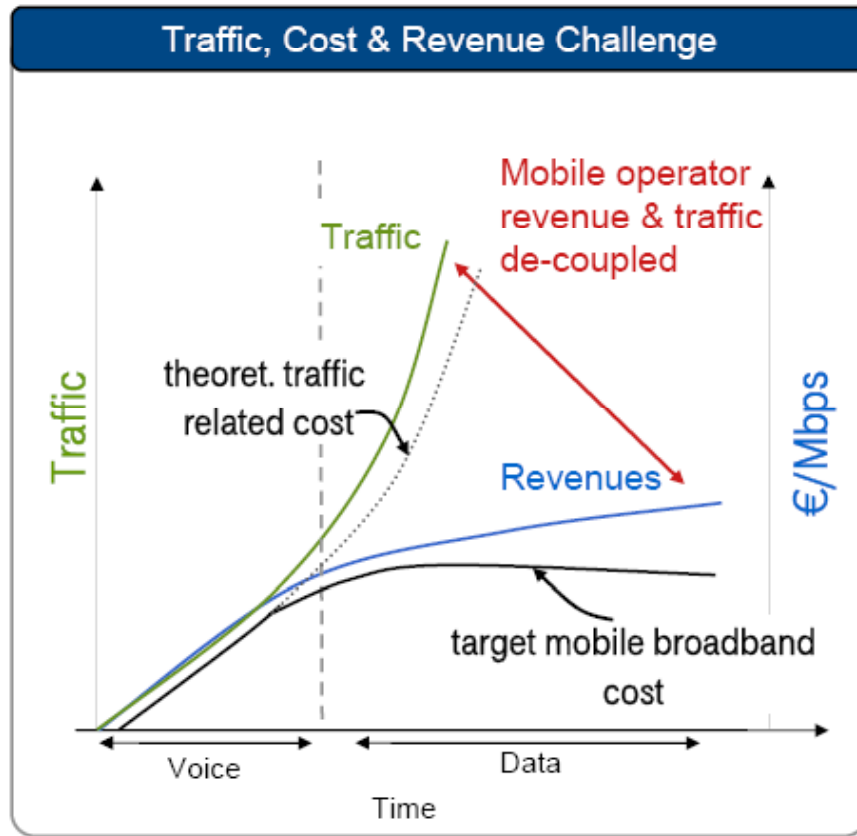
May 2010

W.J. Ahn & S.M.Ryu

PicoCast Forum

What are we doing now ?

Concern over the **Last Mile** : WPAN, NGN, Private Cloud Computing, ...



◀▲quoted from [doc.: IEEE 802. 15-10-0156-03-0psc], March 2010

WORLD
Boston 2010
May 10-13 | Boston Convention & Exhibition Center (BCEC)

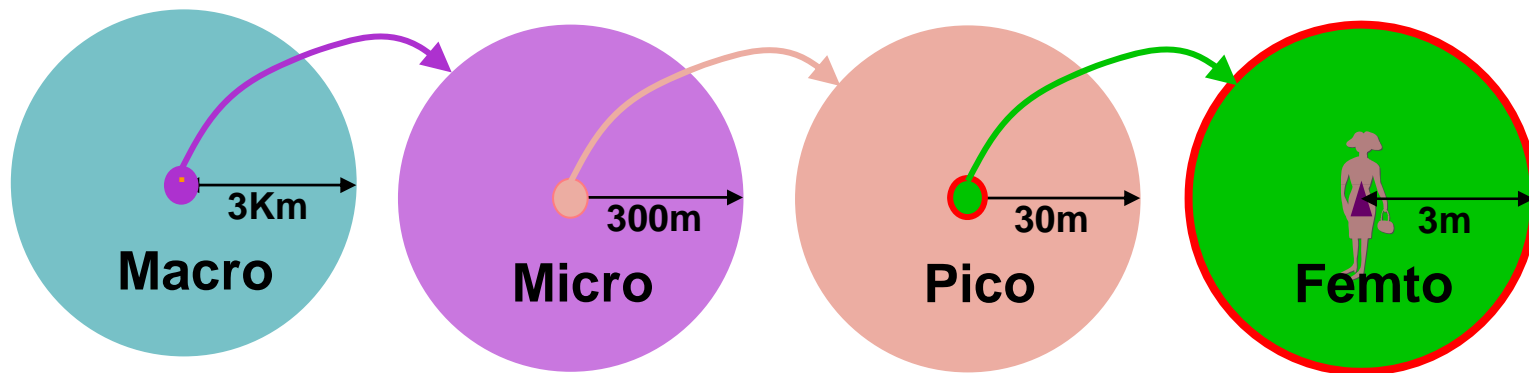
THE JOURNEY
TO THE
PRIVATE
CLOUD
STARTS NOW

Any Solution ?

A Solution for the Concern : **WPAN**

How to increase mobile channel capacity ?

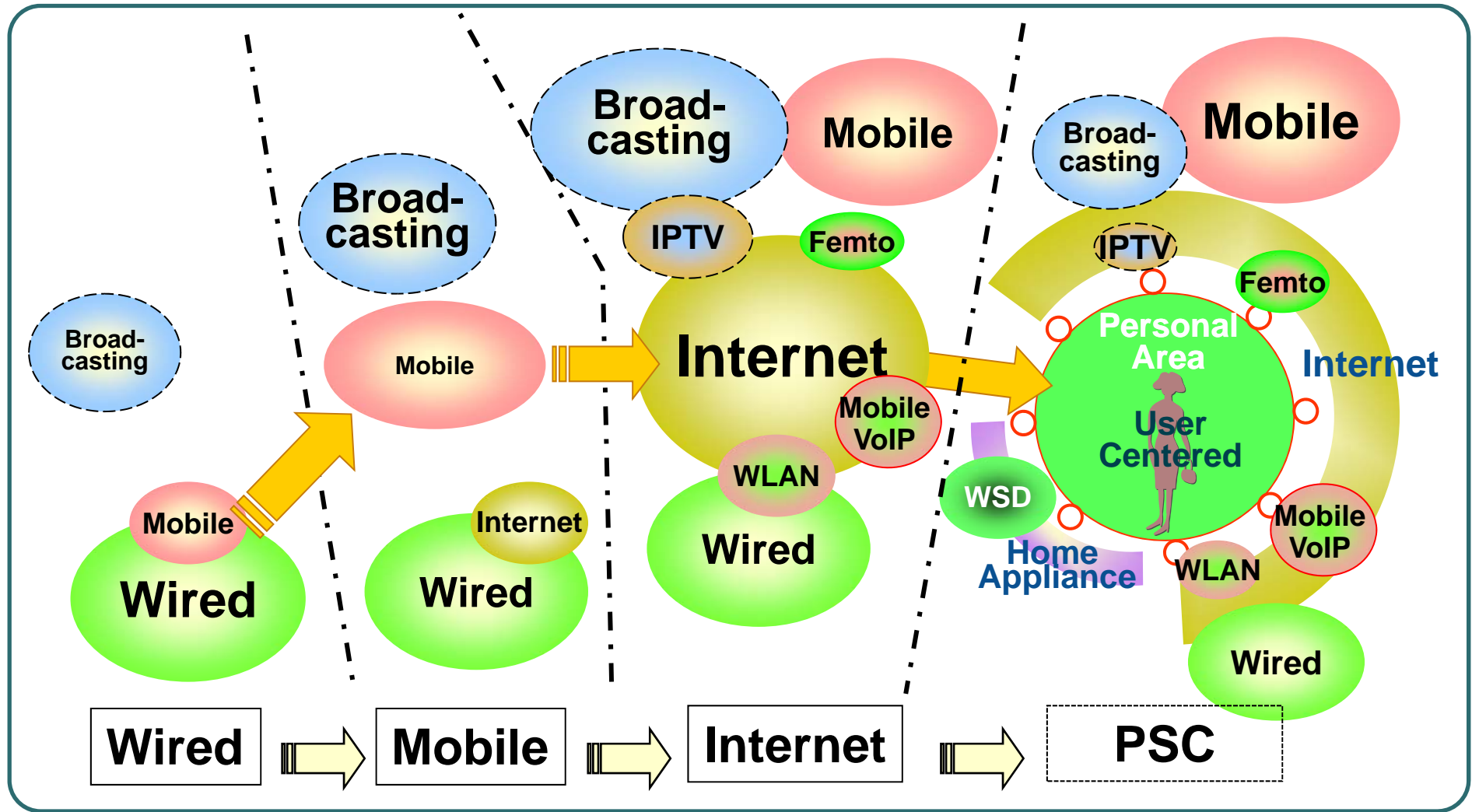
❖ The only way to overcome the capacity issues : reduce cell size



	Macro	Micro	Pico	Femto
Capacity	1	100	10,000	Low Power Personal Space Mobility
Tx Power	1	1/1,000	1/1,000,000	

▲quoted from [doc.: IEEE 802. 15-10-0156-03-0psc], March 2010

Evolution Path of Personal Communication



▲quoted from [doc.: IEEE 802. 15-10-0156-03-0psc], March 2010

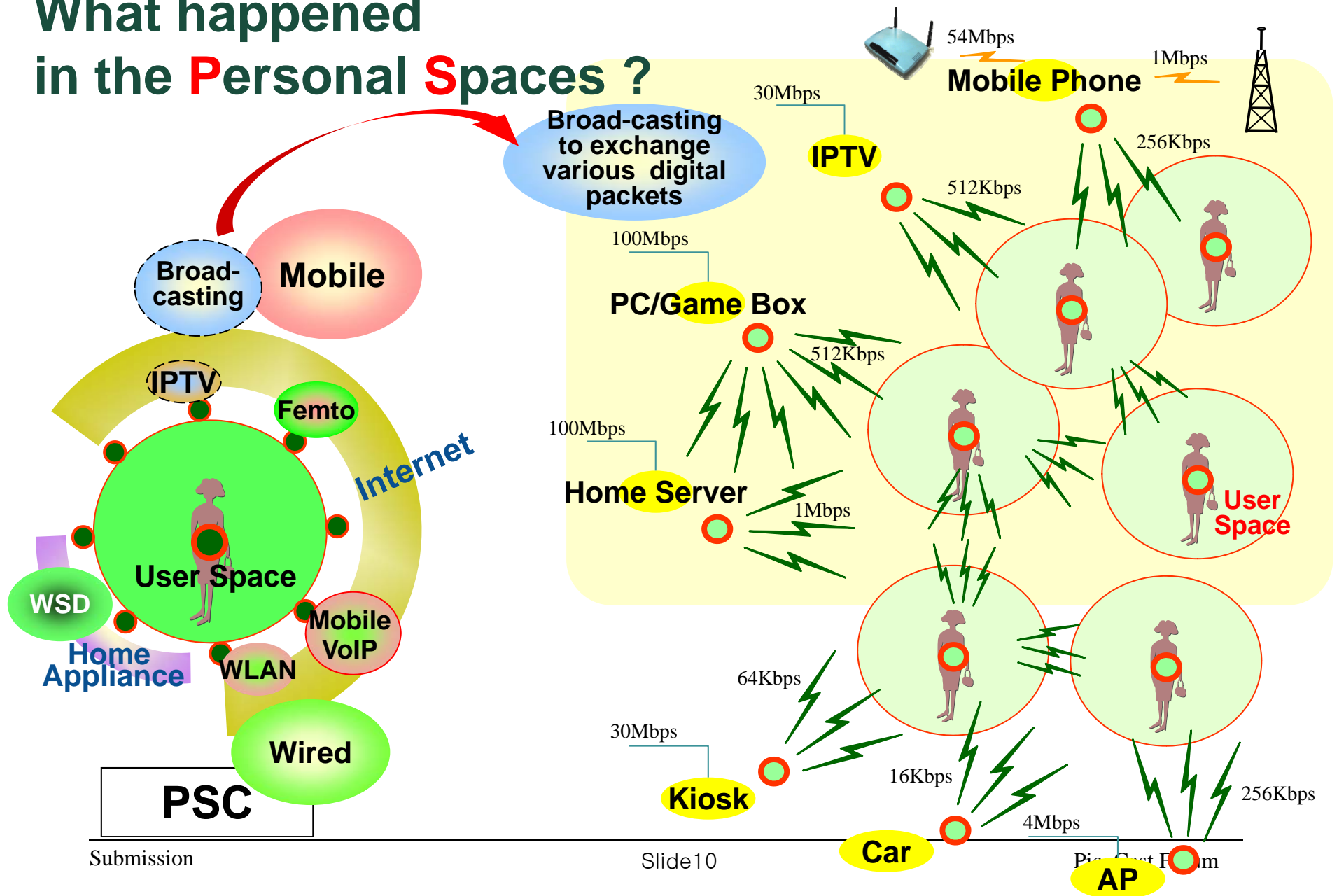
Current Status of **WPAN**



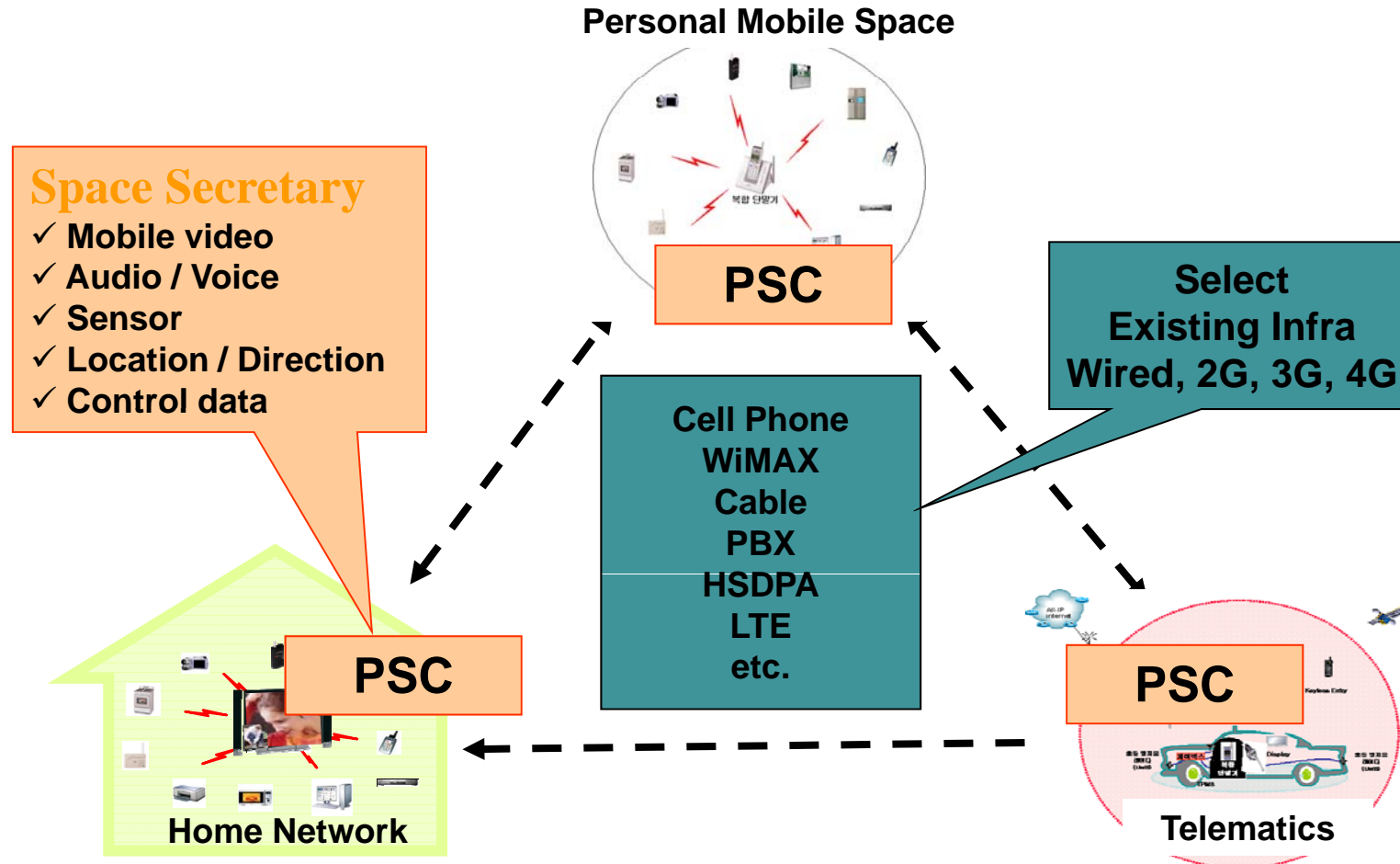
Somewhere Over the Horizon, what could open a new era ?

What would be the Definition of PSC ?

What happened in the **P**ersonal **S**paces ?




Why PSC is so important ? ; 5G infra



In the future, most of users want to maintain their environment mobility within a moving personal space. So, Personal Space Communication(PSC) based on WPAN technology would be leading & killer application of Ubiquitous services in the future. We can view 5G mobile communication is simply the connections of the PSC spaces.

User Scene : Daily life of a youth with PSC



- Connecting to skype to make phone call while doing house chore




- Listening to news on subway monitor



- Attending seminar or class



- Watching TV at home



- Game Cheering & Announcement



- Listening to campus announcement
- Participating 2 way Ads
- Communicating with friends on campus

... Seamless Authentication, Macro/Pico Zone, Common Terminal

Users' Requirements Expected

- Fixed price of Data usage (Eventually free data usage + Free phone call)
- Solid Interactivity & Always On the Net (For so called 'Ubiquitous' ICT)
- Available to exchange any kind of digital data by using enough throughput (Including Controlling Signals, Texts, Pictures, Videos as well as Voices over the air)
- Supporting the Uni-casting /Multi-casting features with minimal power consumption

General Purpose Terminals

- Supporting 4 Kbps ~ 1 Mbps data rate
- MUG Play Independent from MNO's network Available
- Wireless Web 2.0
- HAM in full digital systems

Very Narrow Band Only Terminals

- Information services & LBS
- Mobile Payment
- Mobile Gaming
- Mobile Chatting
- Mobile Office

Scope of Proposed Standard

Feature	Description	Remark
Territory	User-centered space	
Target	PHY, MAC	
MAC	Interference Avoidance, Broadcasting	Higher Synchronization Performance (Ex: longer preamble)
PHY	Any Unlicensed Band	900M, 2.4G, UWB, White Space
Service Range	Comply with International regulations	~30m
Service Modes	Audio, Voice, RFID, Mobile Video, Data Control	base : 1Mbps (Typ : 4Mbps)
Mobility	Pedestrian	~10Km/H
Location	Position & Direction	~ m

SG-PSC

Free Talking

Woody Ahn

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