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ATTORNEYS AT LAW

June 24, 2008

Ex Parte

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186

Dear Ms. Dortch:

On June 23, 2008, Thomas Patton, Monisha Ghosh, Kiran Challapali, Vasanth Gaddam, Gene Turkenich, and Ashish Bakshi of Philips Electronics and Edmond Thomas, Paul Margie, and S. Roberts Carter representing Philips met with Commissioner Robert McDowell and Angela Giancarlo, Legal Advisor to the Commissioner, regarding the television white spaces proceeding.

Philips demonstrated a fully operational white space broadband system – which sensed incumbent signals using technology submitted earlier to the FCC for OET testing and avoided those signals, all while transmitting high definition TV over an empty channel. Philips also demonstrated that the technology could detect a newly introduced incumbent wireless microphone signal, and seamlessly switch to a new open channel without interruption to the HDTV white space transmission. Philips also discussed a number of innovative uses for unlicensed white spaces spectrum. A copy of a presentation Philips provided to the meeting participants is attached hereto.

Pursuant to the Commission's rules, a copy of this notice is being filed electronically in the above-referenced docket. If you require any additional information please contact the undersigned.

Sincerely yours,

/s/ Paul Margie

Paul Margie

Enc.

cc: Angela Giancarlo

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Live Over-the-Air White Spaces Video Streaming Demonstration

Tom Patton
Philips Electronics
June 23, 2008

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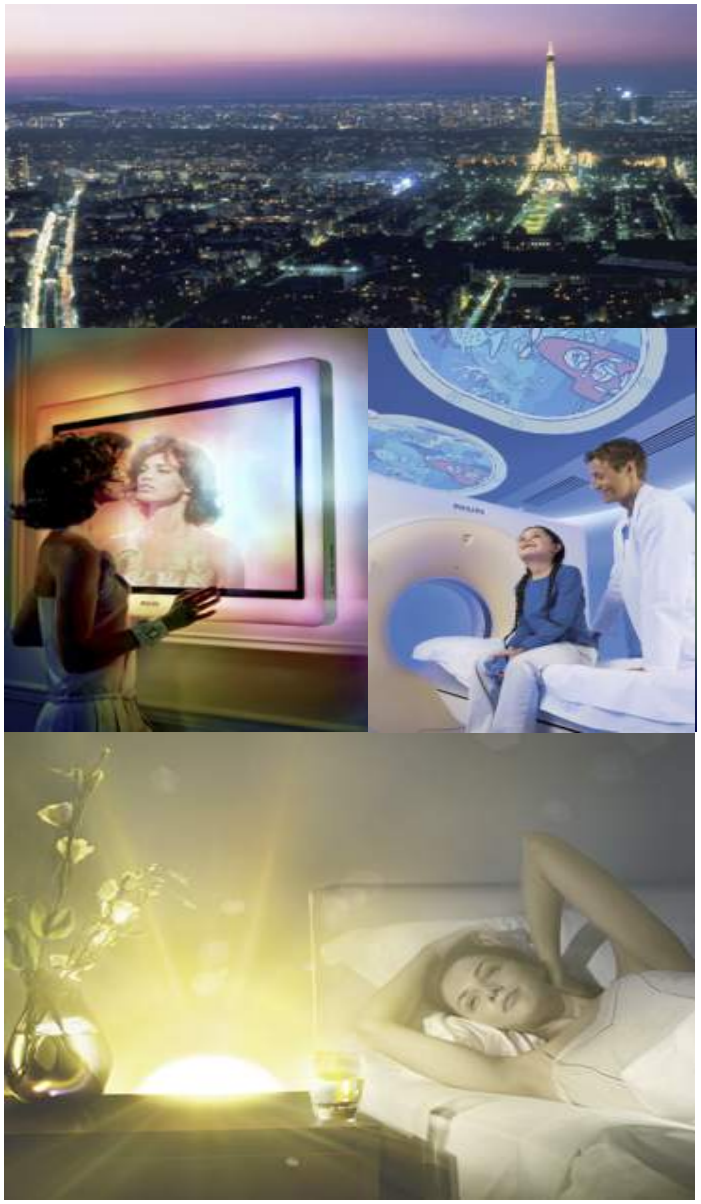
Overview

- Introduction
- Philips and white spaces
- Applications envisioned
- Today's demonstration



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The Digital Home

- At Philips Electronics we are already building the elements of the digital home of the near future
  - Televisions, webcams, home theaters, cameras, gaming systems, and home healthcare products will be linked together with other companies' computers, telephones, HVAC, and appliances – eliminating wires and enhancing each device.
  - But the link must be reliable, have high capacity, and propagate throughout every corner of our homes.
  - White spaces are the critical link

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Philips and White Spaces

- For nearly three decades, Philips has invested significant resources in advanced and digital television technology.
  - Member of FCC Advisory Committee for Advanced Television Services (ACATS) and founding member of the DTV Grand Alliance. We understand interference characteristics of TV broadcast spectrum

- Philips believes that white space devices will play a significant role in realizing the promise of a consumer-friendly digital home network with no interference to existing services

- Today we will demonstrate how we envision Philips TV WS technology would be used in a video distribution solution for the digital home.

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Philips also pioneered Cognitive Radio technology

- Cognitive Radios:
  - Are fully aware of the activities in the electromagnetic spectrum around them, and
  - Can make adjustments to their transmission characteristics in terms of transmit power, frequency and time, so that no harmful interference is caused to the incumbent users

- Philips views this technology as the “silver bullet” for developing innovative, wireless services and applications.

- Philips received the prestigious Frost and Sullivan 2007 North American Excellence in Research of the Year Award in the field of cognitive networks.

2007

FROST & SULLIVAN

North American Cognitive Networks
Excellence in Research of the Year Award

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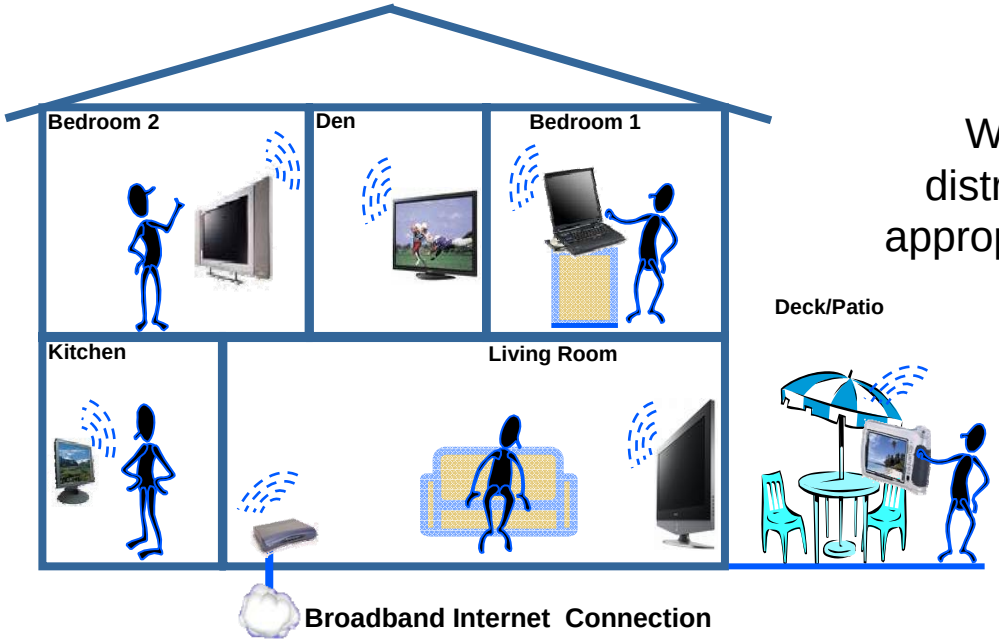
DTV and the Digital Home

- Wireless distribution of high-quality high-definition television for whole home using the white spaces will vastly improve the DTV experience.
  - The white spaces have the right propagation characteristics
  - Licensed bands and existing technologies don't do the job



Whole home high-definition distribution will be a reality with appropriate white spaces FCC rules

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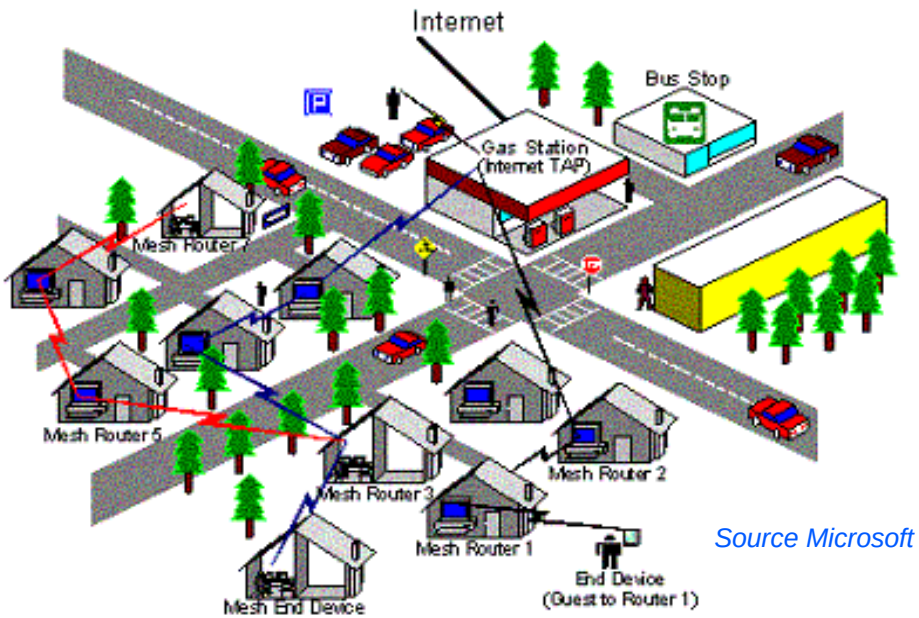
Broadband Internet Access In Neighborhood Networks

- Community-based multi-hop wireless mesh networks operating over TV WS may bring an affordable solution for providing broadband Internet access to underserved markets. Everyone in the neighborhood contributes to network resources and cooperates for relaying messages.
  - Self organizing
  - Multi hop
  - Mesh connected
  - Longer range (UHF)
  - Particularly suitable for security applications covering communities and campuses



Source Microsoft

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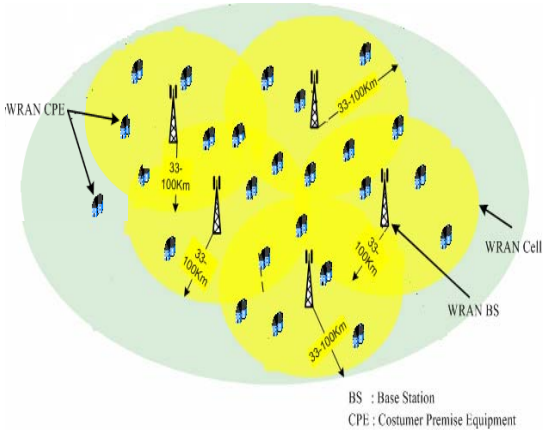
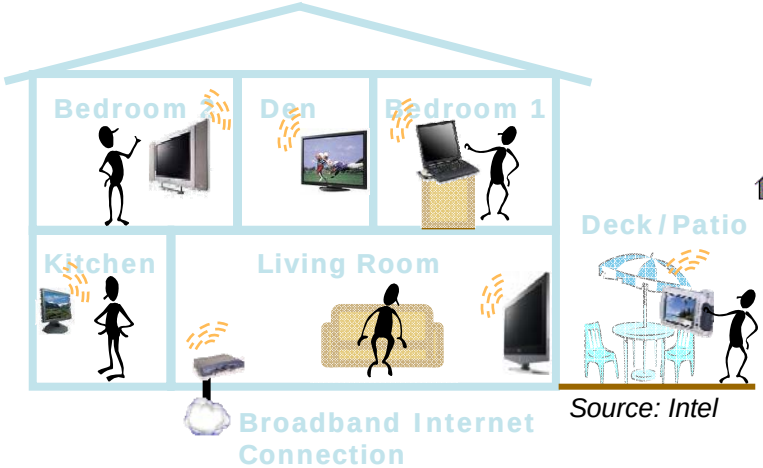
Potential TV WS Applications

WRAN (IEEE 802.22)



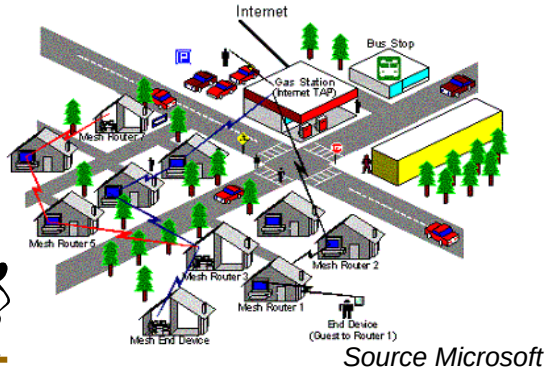
High Power Fixed

In-Home MM Distribution



Source: Intel

Neighborhood Networks



Source Microsoft

Low Power Portable

Tele-Health
(Assisted Living & Elderly Care)

Hospital

Fixed and/or Portable

Home Automation & Control

Low Power Portable

Telephony

Low Power Portable

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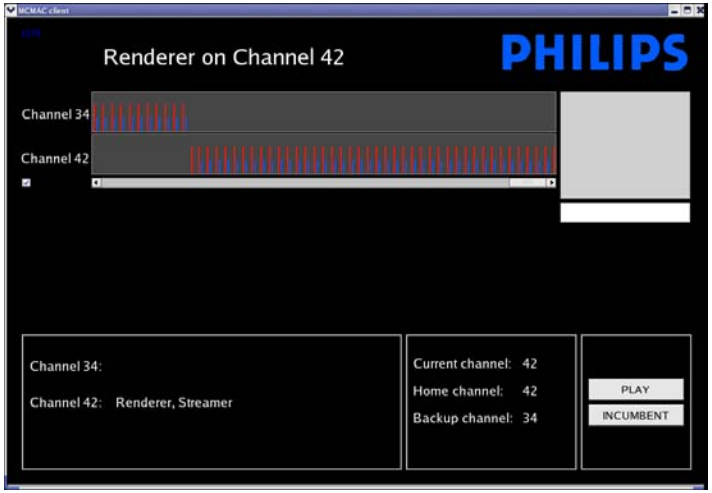
Demonstration



- A Cognitive Network operating over UHF TV white spaces, consists of 3 nodes.
  - Sensing Unit: Constantly scans and senses UHF spectrum for analog and digital TV broadcasts, and indicates unused (white) channels.
  - Cognitive Operation: If an incumbent begins to transmit on the current channel of operation, all network nodes in cooperation jump to another available white channel.
  - Video Streaming Application: No interruptions in video occur while the cognitive radios switch over the available white channels

Conclusion

- As a pioneer of both DTV and Cognitive Radio technology, Philips is confident, and has demonstrated, that TV White Spaces can be utilized successfully for new wireless applications without compromising DTV services.
- Important applications include broadband Internet access in underserved areas, home and community networks, home healthcare and home controls for energy efficiency and more.
- FCC rules to permit more effective utilization of the TV broadcast spectrum will spur competition and innovation in a host of products, technologies and services for the consumer.

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