# Digital Living Network Alliance

Networking for the Everyman: How to interact with Content without really trying The vision of the Digital Living Network Alliance

Presented by Scott Smyers
Chairman, DLNA Board of Directors

DLNA
Digital Living Network Alliance

# Three Digital Technology Islands





PC Internet World

CE Broadcast World



# **Growing Content**

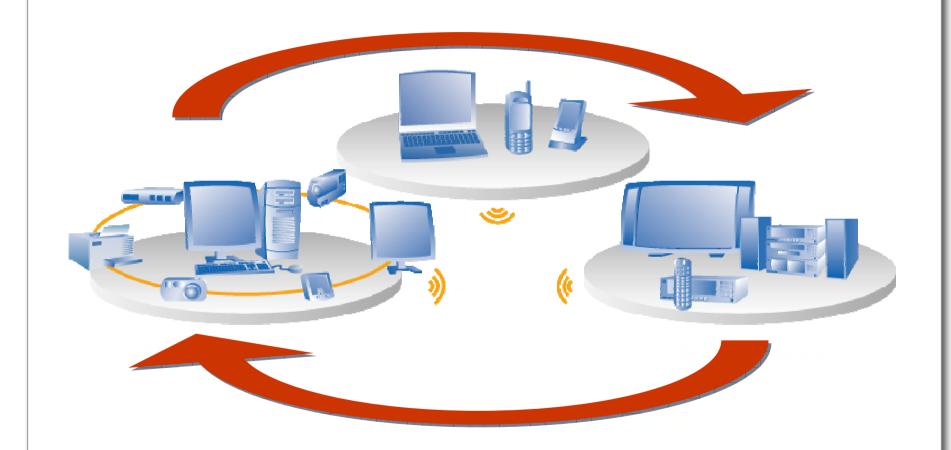
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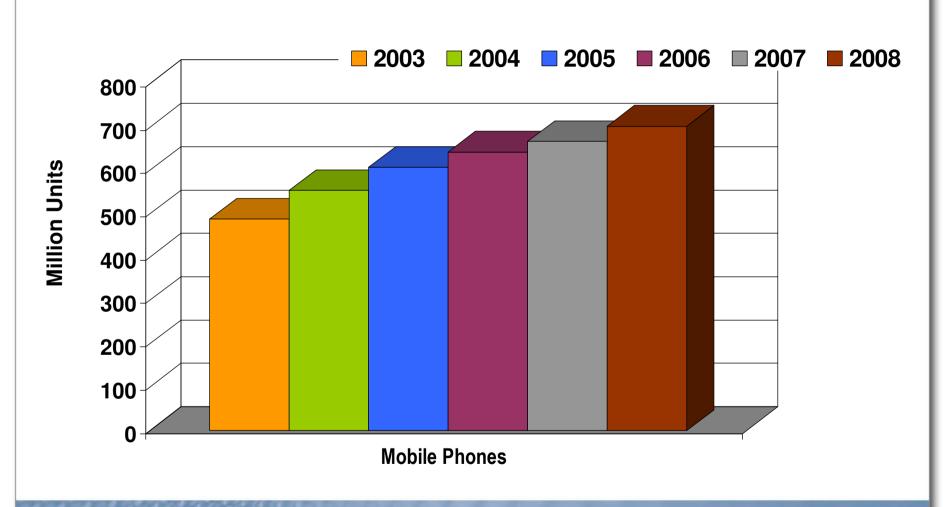


# Goal: Total Digital Convergence





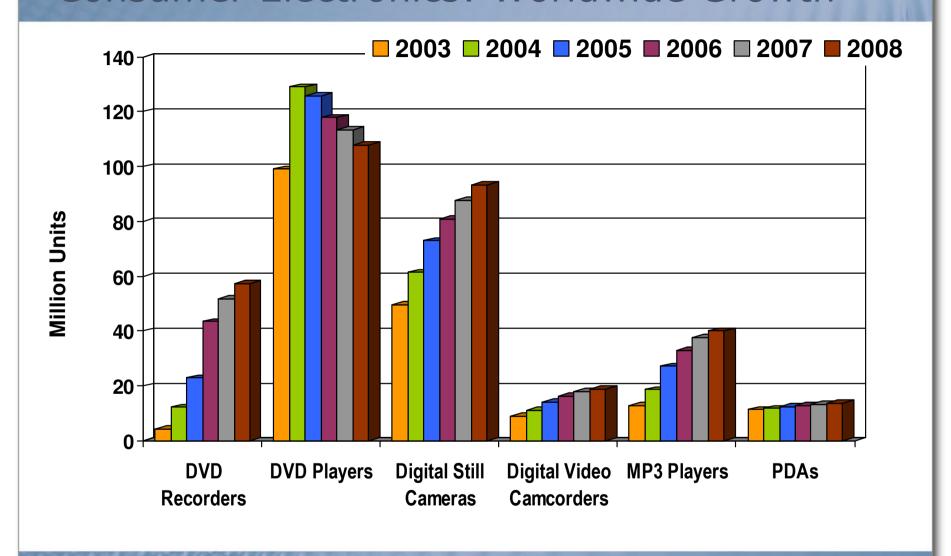
## Mobile Phones: Worldwide Growth



Source: Market Intelligence Center, a Taipei-based ICT industry research and advisory firm, 2004



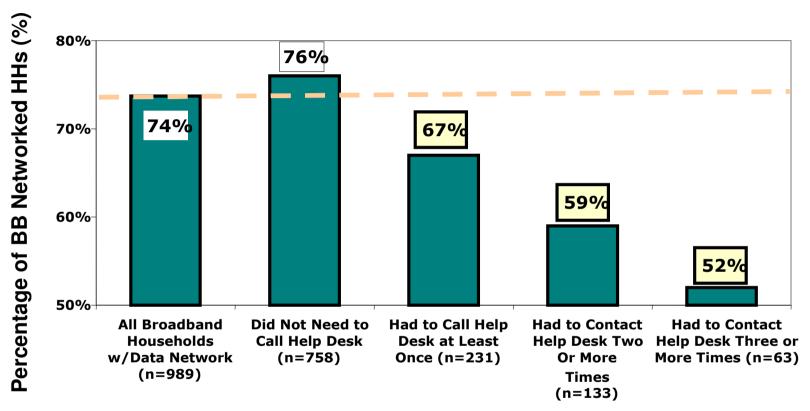
### Consumer Electronics: Worldwide Growth



Source: Market Intelligence Center, a Taipei-based ICT industry research and advisory firm, 2004



### Satisfaction of U.S. Home Networks



(Percentage of data network users rating satisfaction of solution as a 6-7 on a 7-point scale, where "7" means "completely satisfied")



# **Product Variations**









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### **Product Format Variations**

#### **Imaging**

- > BMP > PCT
- > CLP > PCX
- > DCX > PNG
- > DIB > PPM
- > FPX > PSD
- > GIF > PSP
- > RAW
- > IMG > RLE
- JIF
- TIFF > JPEG ....
- > WPG
- MAC
- > MSP

#### **Audio**

> a2b

> MP4

PCM

TAC

u-law

WAV

**WMA** 

MPEG Audio

QuickTime

RealAudio

TwinVQ (VQF)

Compression

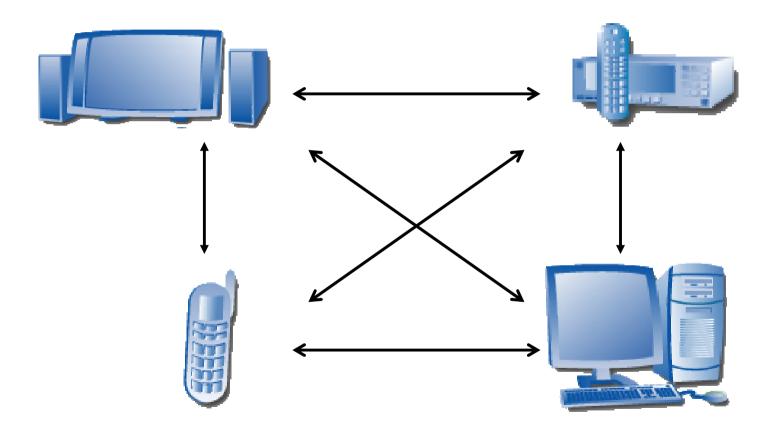
- > AAC
- > AC-3
- > ADPCM
- > AIFF
- > ATRAC3+
- > AU
- > CDDA
- > DPCM
- > EPAC
- > MP3

#### Video

- > ASF > MPEG-1
- > AVI > MPEG-2
- > DAT > MPEG-4
- > DivX > QuickTime
- > DV > RM
- > FLC > UIS
- > FLI > WMV
- > FLX
- > GIF

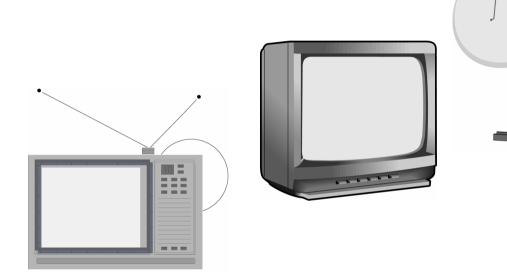
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# **Product Compatibility Varies**



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# The Evolution of Mediums





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# What Exists Today

#### Mobile Device World



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# Digital Living Network Alliance



# Digital Living Network Alliance

Who We Are: A cross-industry organization of leading consumer

electronics, computing industry and mobile device

companies.

Our Founding: Established in June 2003 by 17 companies

Our Goal: To enable the cross-industry convergence by

establishing a platform of interoperability based

on open and established industry standards.



# 17 Global Brand DLNA Leaders



































NEC Personal Products. Ltd.

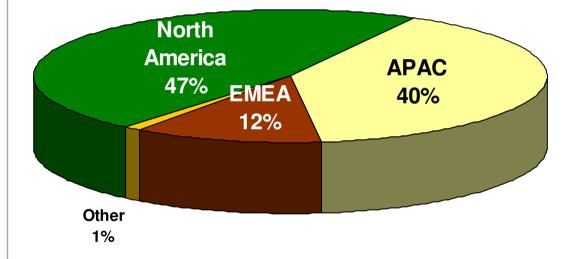
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### DLNA Interest Has No Boundaries

#### Support by Region



#### **Industries**

- > CE
- > Components
- Mobile
- > Network
- > PC
- > R & D
- > Semiconductor
- > Telecommunications

As of September 2004



# Home Networked Device Interoperability Guidelines v1.0

Drafted and Released in One Year



# Worldwide Participation



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# Industry Networking

Goal:

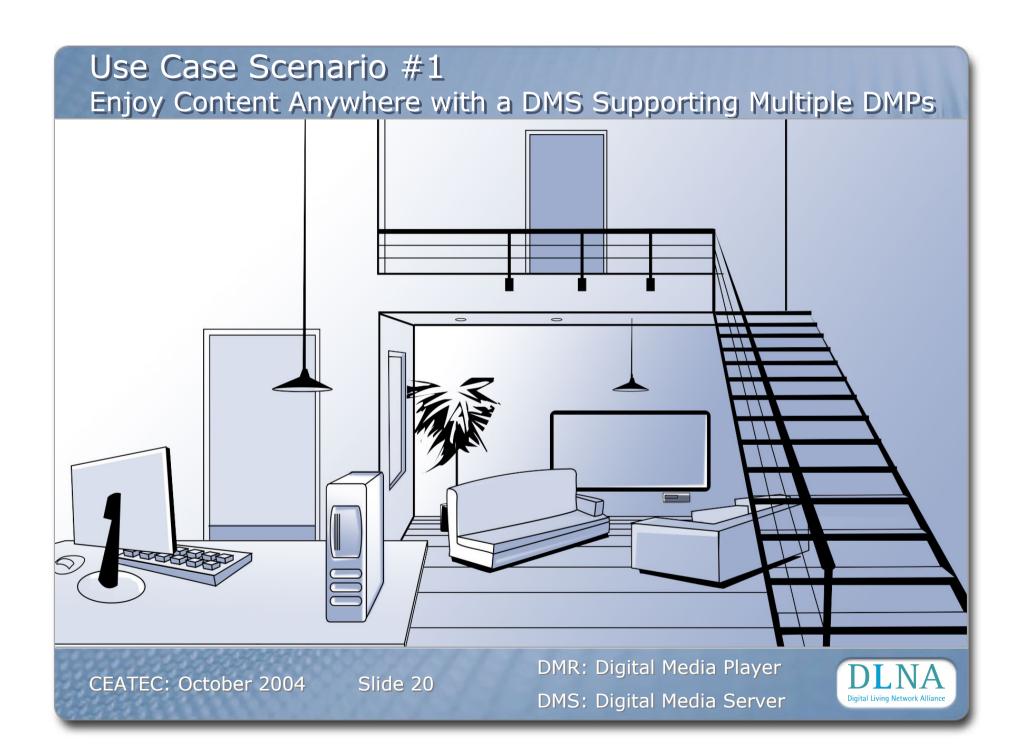
To liaise with other industry consortia and organizations to promote DLNA goals for technical and market requirements.

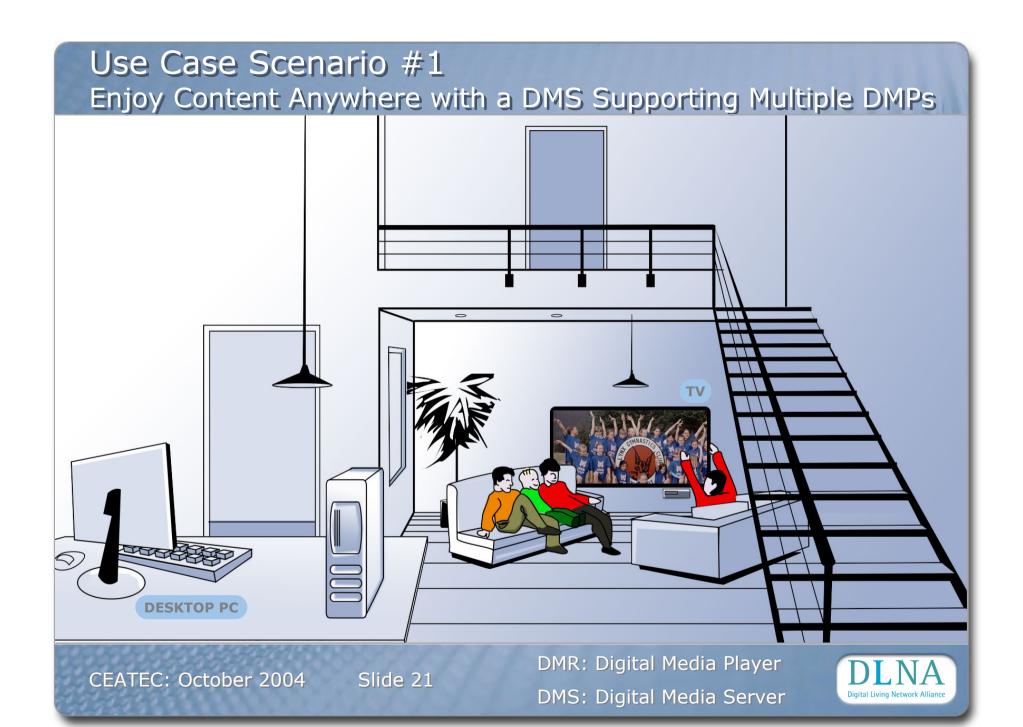
- > Dedicated subcommittee managing liaison partnerships
- Highlights
  - UPnP™ Implementers Corp.
  - UPnP™ Forum
  - Wi-Fi Alliance

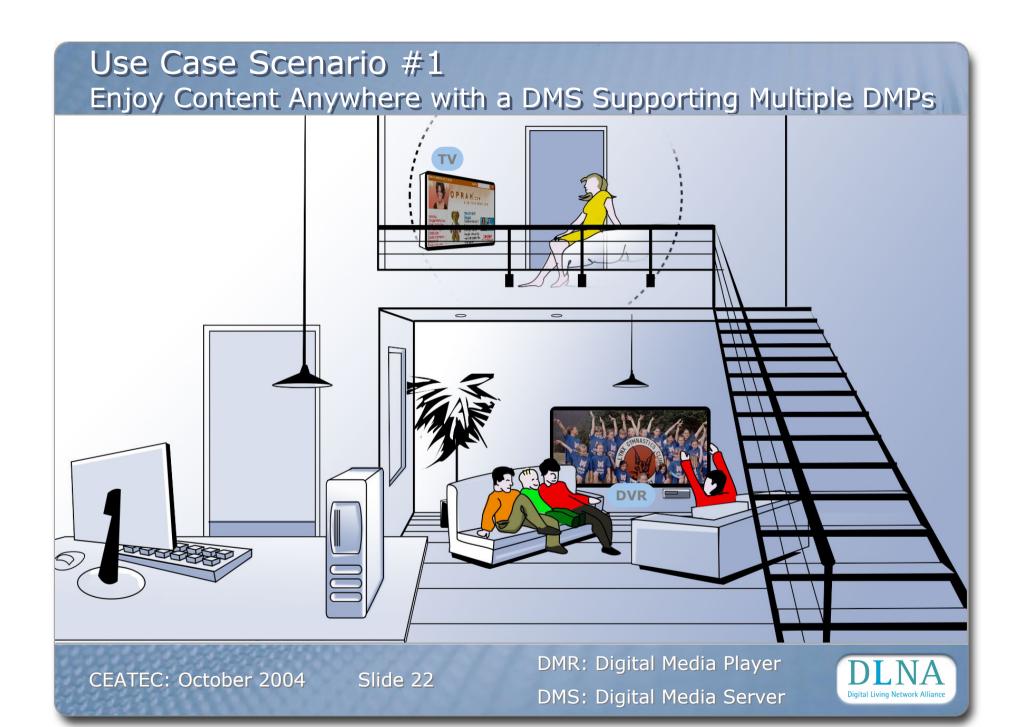
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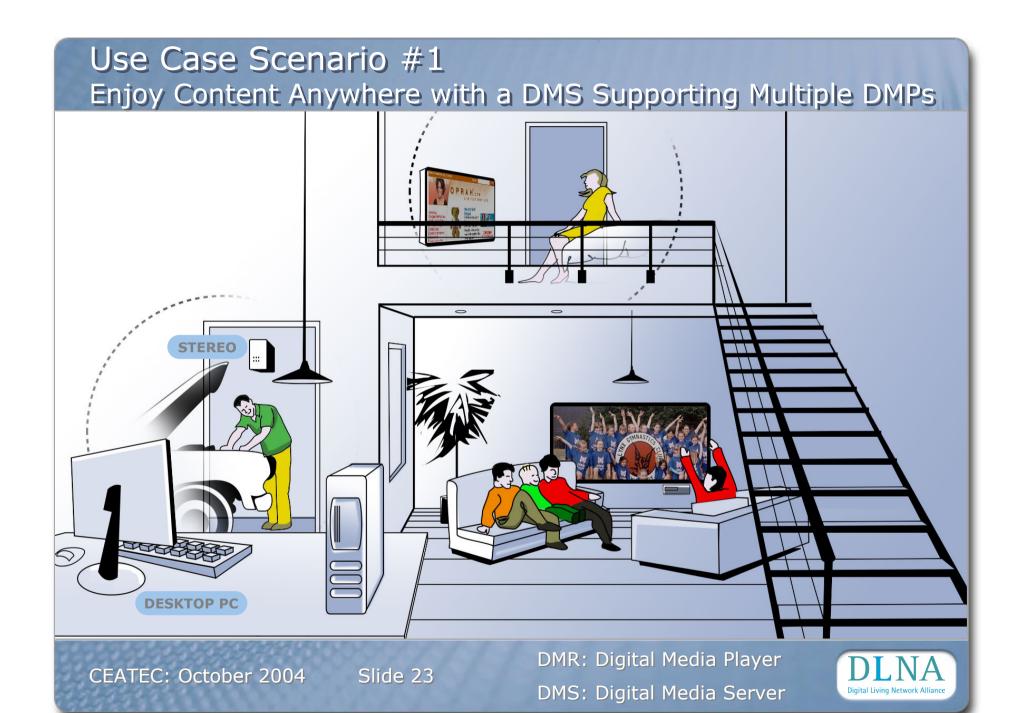
- Consumer Electronics Association
- IGRS: Intelligent Grouping and Resource Sharing

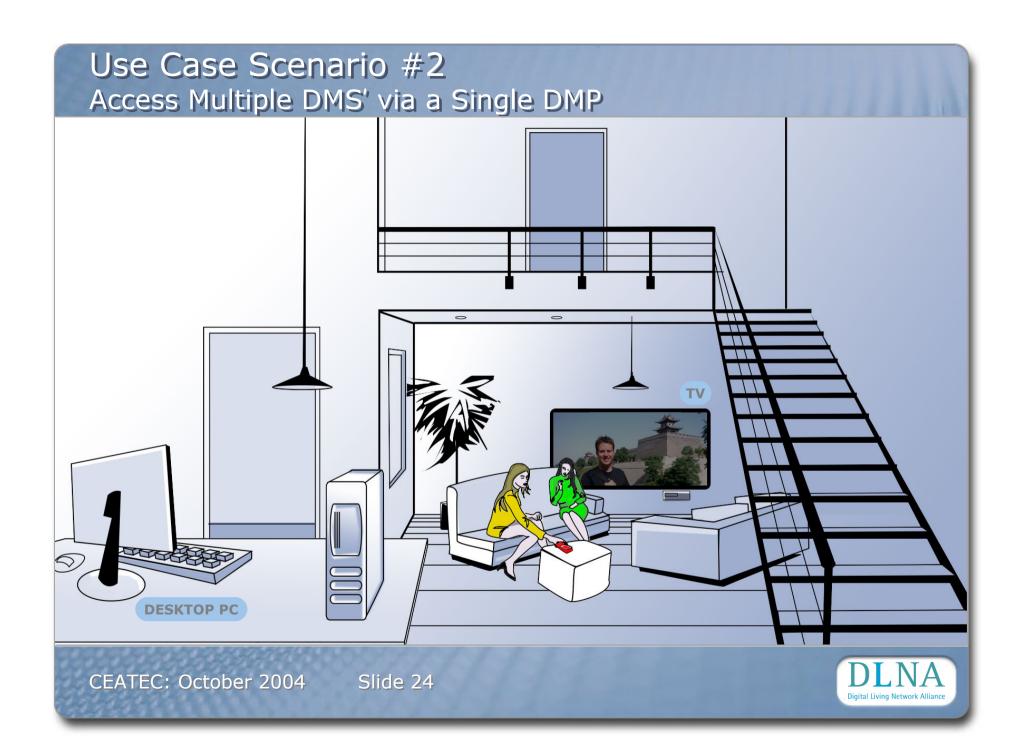




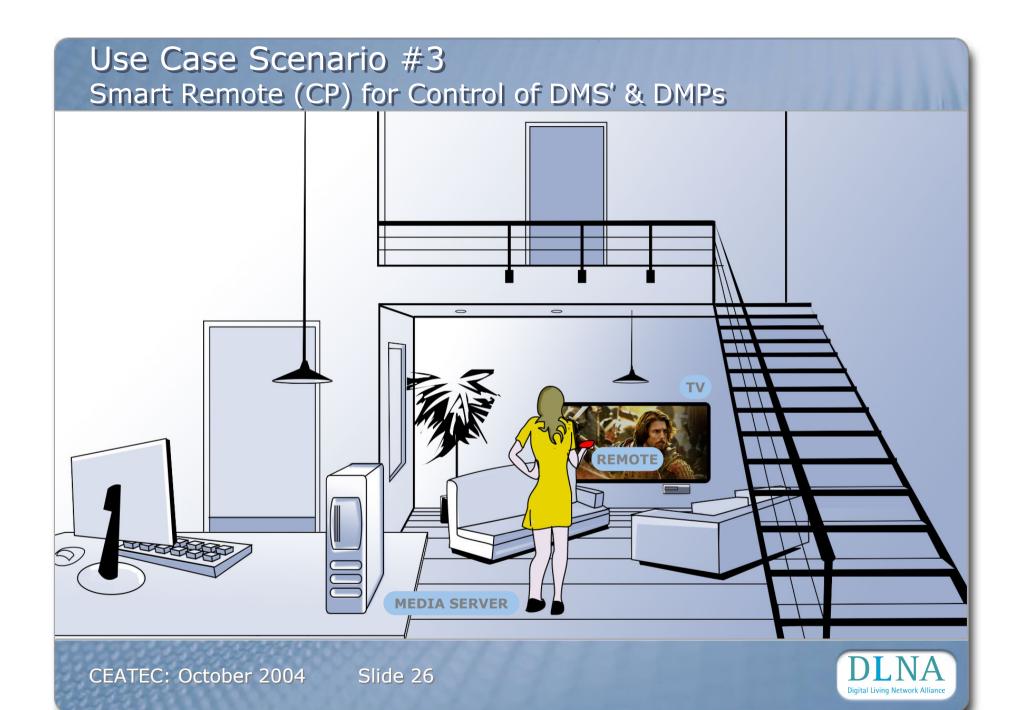


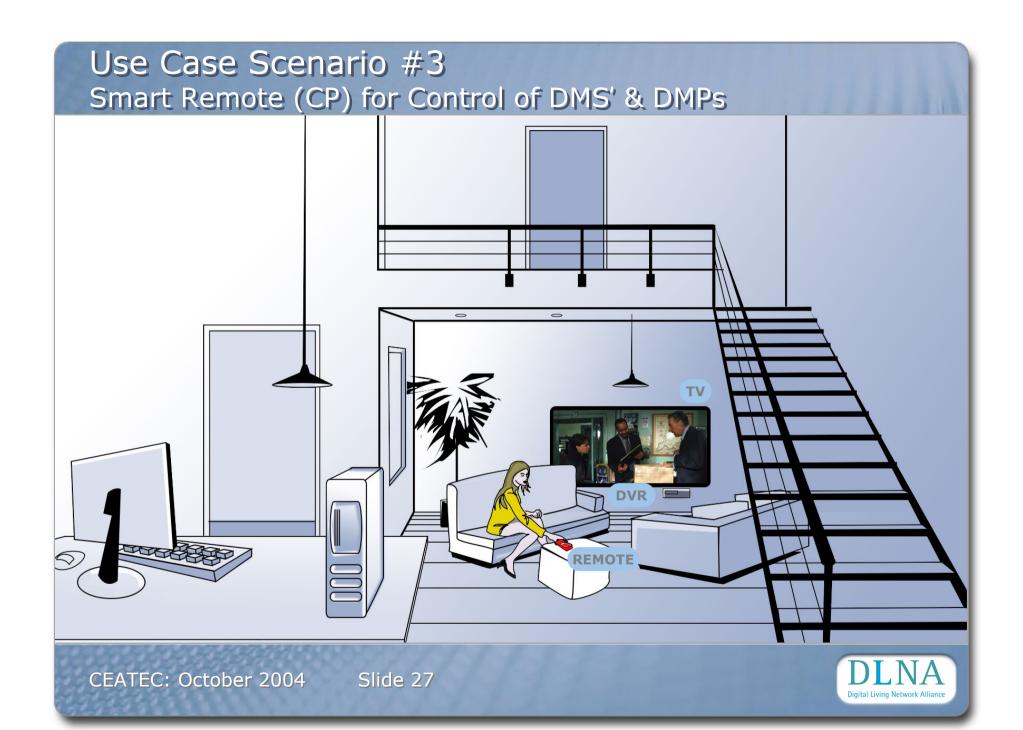












# DLNA Interoperability Guidelines Framework for Sharing Content

Media Formats

Device Discovery, Control and Media Management

Media Transport

**Network Stack** 

**Network Connectivity** 

JPEG, LPCM, MPEG2

UPnP AV 1.0

UPnP Device Architecture 1.0

HTTP 1.0/1.1

**IPv4 Protocol Suite** 

Wired: 802.3i, 802.3u Wireless: 802.11a/b/g



# Companies Exhibiting at CEATEC



奇揚網科股份有限公司 **AWIND INCORPERATION** 















KENWOOD













NEC Personal Products. Ltd.















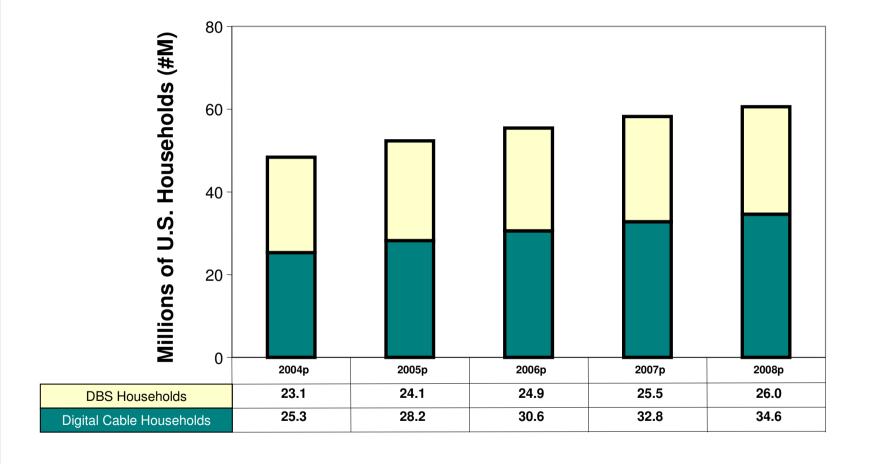


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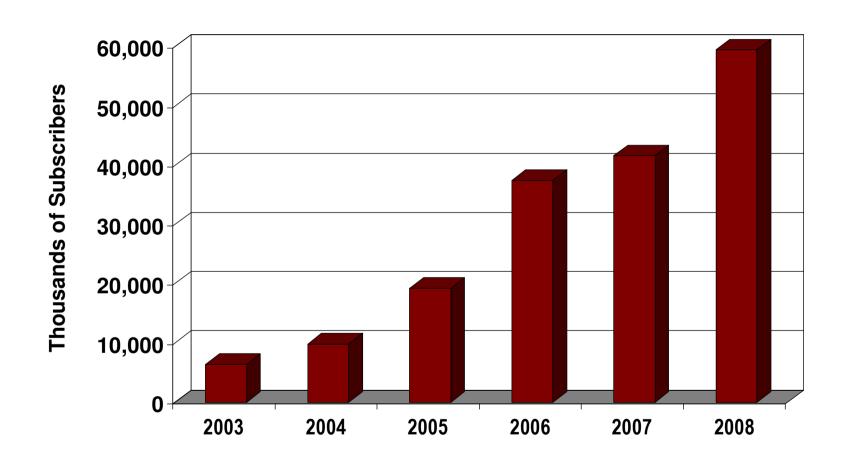
### Growth of U.S. Premium Television Customers





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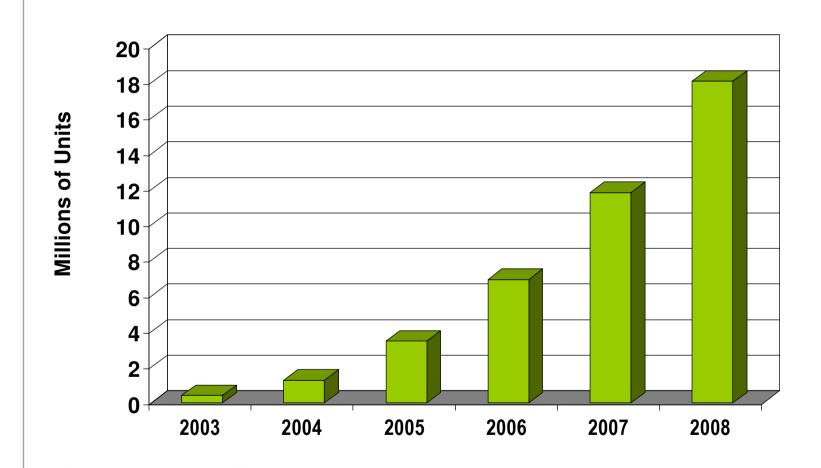
# Asian Broadband VoIP Subscribers





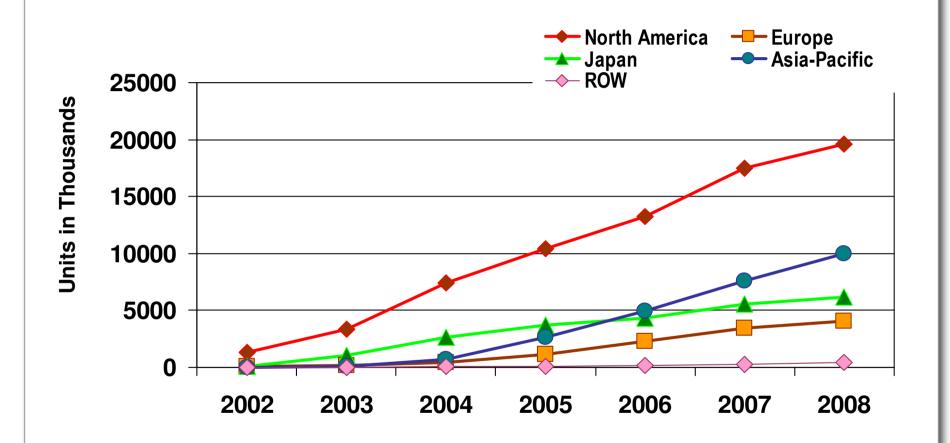


# European Integrated DVR Installed Base



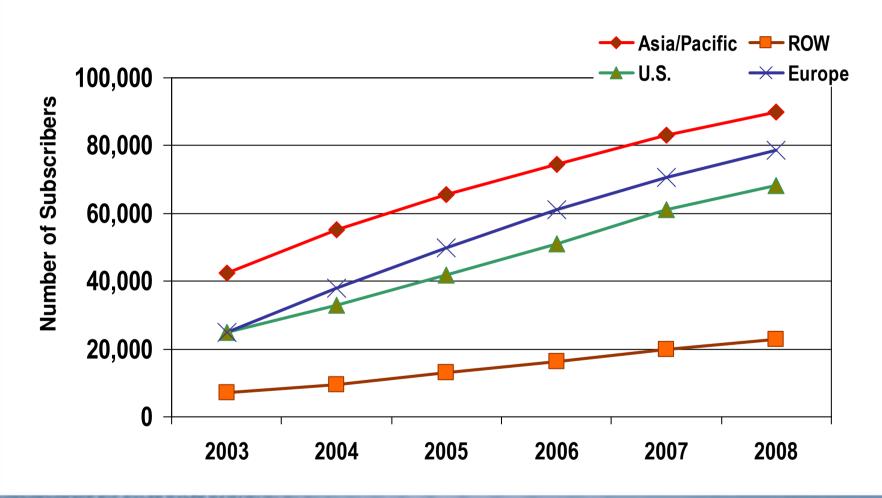


# Worldwide PVR Unit Shipment Forecast





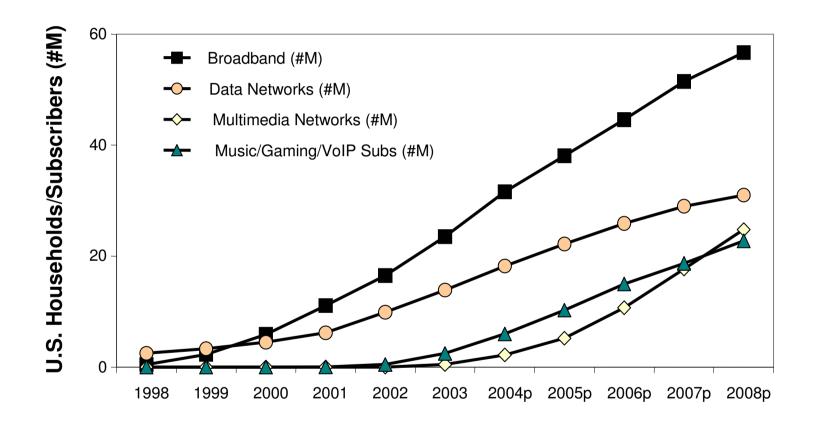
## Worldwide Broadband Services



Slide 34 Source: "Worldwide Broadband Access Services 2004 – 2008 Forecast Update", IDC, July 2004

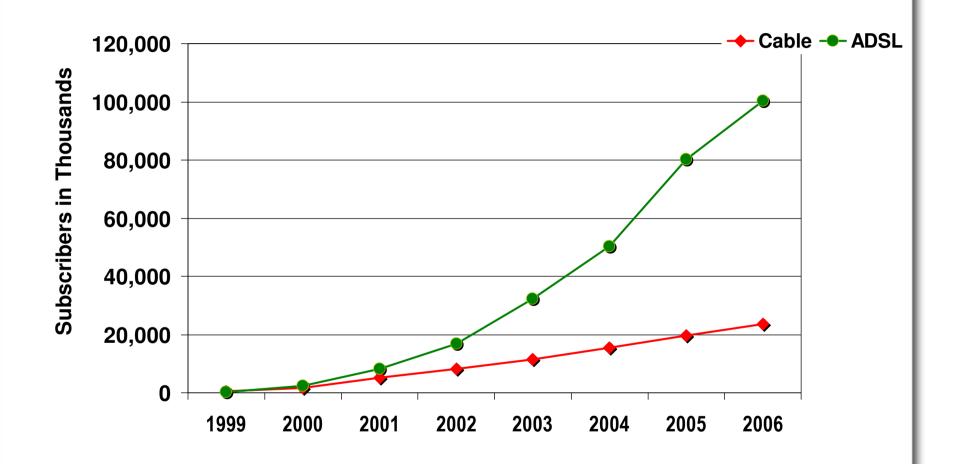


# U.S. Digital Home Applications Growth





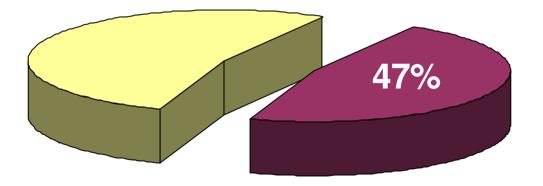
### Growth of Asian Cable Modem and ADSL Usage





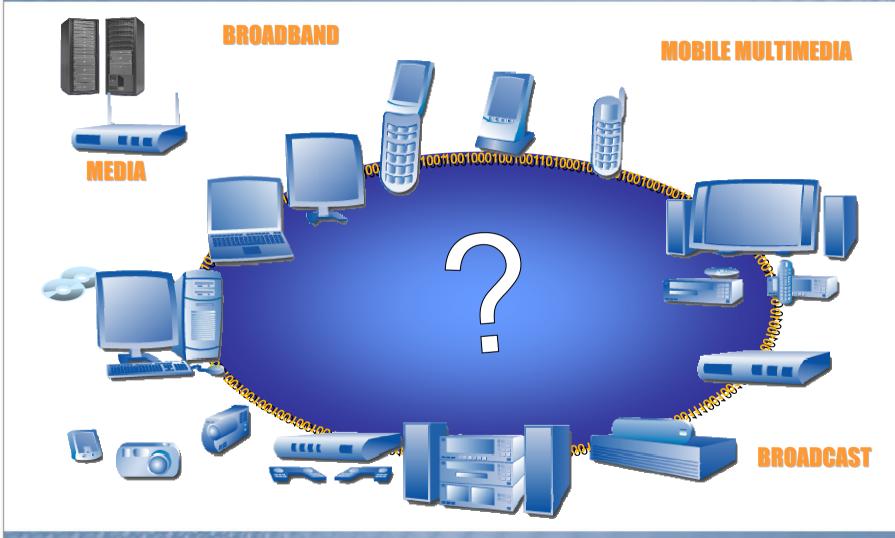
# International Digital Home Applications Growth

# Number of European Broadband Households with Home Networks by 2008<sup>1</sup>





# Future of the Home Network



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Enjoying Content in the Digital Living Network:

DLNA's Effort and Future Vision

