



OMA World London 2007

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# KPN Royal Dutch Telecom



Telephony, Internet and  
Television in The Netherlands  
Mobile communication in The  
Netherlands, Belgium (BASE)  
and Germany (E-Plus)  
24.890 employees (fte's)  
(18.071 in The Netherlands)  
Listed in Amsterdam, New York,  
London and Frankfurt

This is me !

# A changing world

- From traditional phone company to multimedia concern
- Innovations which are of real use to our customers, instead of just technical products and services



## OMA BCAST our choice for TV on mobile

- The three main reasons
  - Transparent content and service protection
  - Build in Interactivity
  - Can be used on top of different bearers

*Wide industry support hopefully strong enough to repeat the GSM story*

# Vision on digital TV

*TV as one of three main ways of interaction*



**TV broadcast**

Digital TV packages

Digital video recorder

View programs that you missed

Video on demand

**Interactive**



**Personal TV services**



DVB-H

UMTS

Wifi



DVB-T IP-TV



# Conditions to realise our vision

Open standards suitable for convergence

Transparent content and service protection

Allowing flexible business models

Interactivity build into the standard system.

Combination of personal and mass-market services

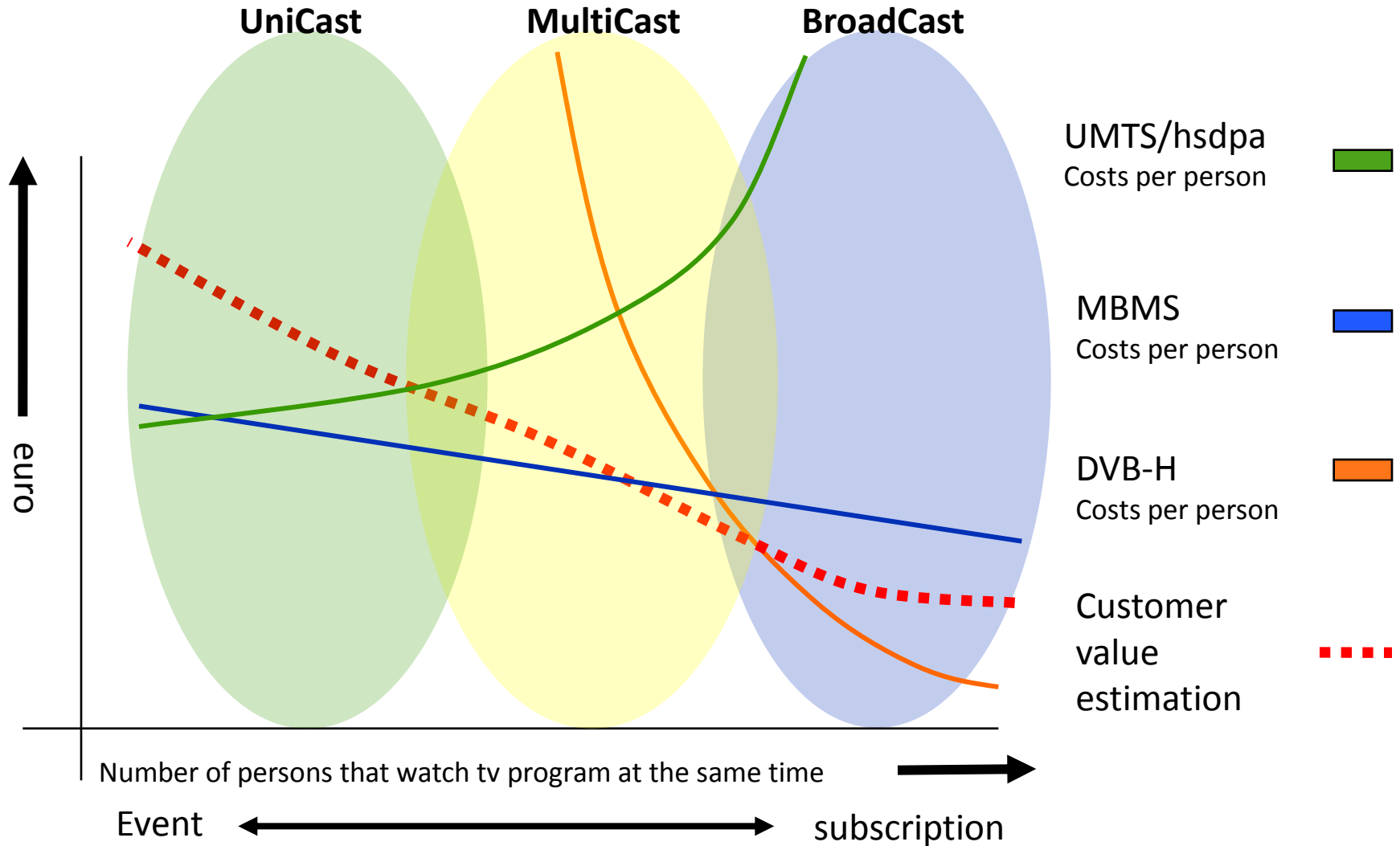


# Technology issues mobile broadcast (2006)

- Multiple bearer technologies for broadcast type of services
- No exchangeable protection standards
- No convergence of technology behind one interface.
- “Battle” between different standards

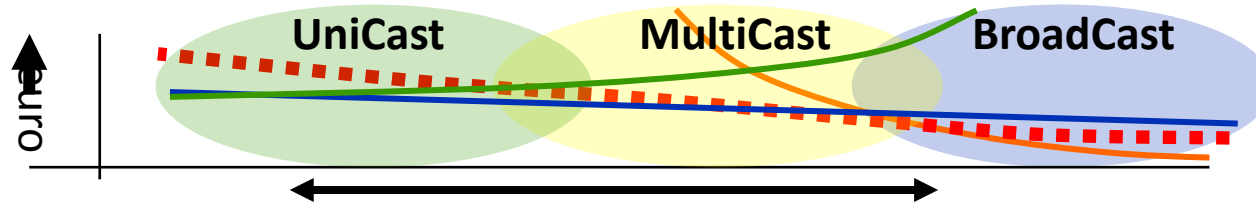


# The problem to solve



Delivery cost vs. value for customer mobile bearers

# Our challenge



80 % interactive 20 % lean back



60 % interactive 40 % lean back



10 % interactive 90 % lean back



# Why choose OMA-Bcast

- One Electronic service guide for all mobile TV services
  - DVB-H
  - UMTS
  - MBMS
- OMA B-cast is the only standard that specifies a generic service layer for this.
- Open definition for service protection compatible with 3G networks and future OMA-DRM implementations.
  - Allow for mass market handset development with a high expectation for availability of multiple devices at the right price level.
  - Allow for media devices developed for retail sales, that can be provisioned by KPN for Mobile TV services.

# Why choose OMA-Bcast

- Future opportunities when applying this standard for Fixed TV services
  - One Electronic service guide for all TV services
    - DVB-T
    - IP-TV
- Open definition for service protection, compatible with future DRM implementations.
  - Allow for media devices developed for retail sales, that can be provisioned by KPN for Mobile and fixed TV services.
  - Content protection mechanism are shared with on demand content services.
  - Enable Home network service scenario's

## Our choice OMA B-CAST

- Open standards suitable for convergence
- Transparent content and service protection
- Allowing flexible business models
- Interactivity build into the standard system.
- Combination of personal and mass-market services

# Richer customer proposition by combining mobile bearers

7 augustus	13:30	14:00	14:30	15:00
<b>DSF</b>	DSF Report	Pok	Das Sportquiz	
<b>Das Erste</b>	Radsport: Deutschland Tour			
<b>Doku/KiKa</b>	Tigerenten Club	Die Kinder vom Alsterta		
<b>Eurosport</b>	Kan	Volleyball	Skispringen	

More channels by combining bearers selected from one ESG

DVB-T IP-TV



Wifi



DVB-H

UMTS

Unicast

Multicast

Broadcast

# KPN Sluit je aan! (KPN Connects You)

- The USP of KPN to Customers is to manage media consumption across the different technologies.
- The benefit for KPN is to match the customer value per use to the cost of delivery.
- Our technology choices focus on this multi channel multi bearer principle



# OMA BCAST is our choice for the Service layer

delivering the TV service experience  
“watching”

Watching

Interaction

Communication



# Standards will help



1983



1992 (GSM)



2005 (GSM)

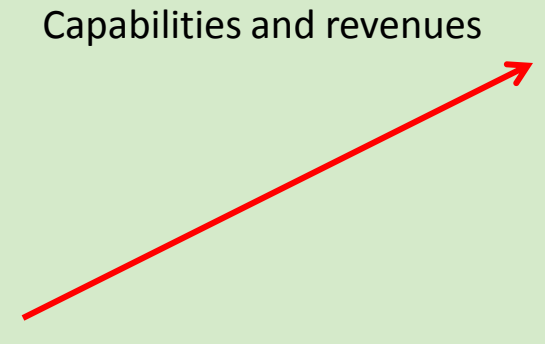
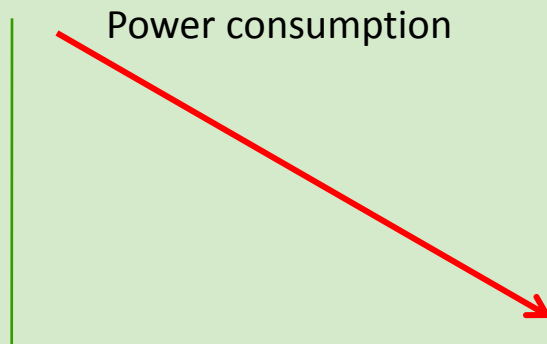
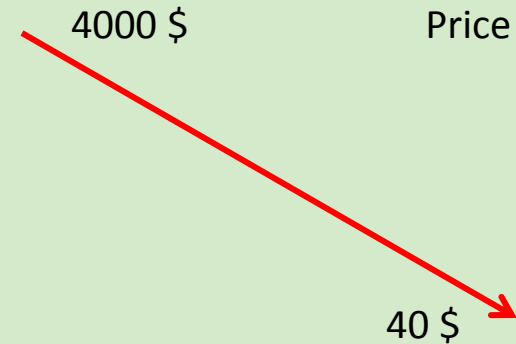
4000 \$

Price

40 \$

Power consumption

Capabilities and revenues



Due to standards the mobile industry was and is capable of sustaining growth and decreasing price and energy consumption at the same time.

# Take aways

- Now 4 devices in one
  - Integrated at the IP layer
  - Telephone, radio, web browser and TV
- Save the world go mobile!
  - Standards help to drive energy consumption and prices down

Many thanks to the OMA-BCAST team, especially the chair, Sungoh Hwang from Samsung Vice Chair, Mark Lipford from Sprint and the previous Chair who started the chain Toni Paila from Nokia