

research@Orange labs

building competitive advantage  
through innovation

summary of demos

june 21<sup>th</sup>, 2007 - Issy-les-Moulineaux

## list of demos

- my 3D medical desktop
- zero pain service
- widget zone & wignet
- 3D TV
- 3D sound

# my 3D medical desktop research@Orange labs

investor meeting  
june 21<sup>st</sup>, 2007 - Issy-les-Moulineaux

# business background

- lack of medical experts and strong specialization of the practitioners in the medical eco-system create a strong need for **distant collaborative communication tools**
  - multi-disciplinary coordination required for diagnosis, therapeutic choices and surgical planning.
  - specialized health networks under creation (radiology, emergency, oncology)
  - organization of multi-specialty meetings addressed by the directive 31 et 34 of the French “plan cancer”
- the **need to access in real time to hospitals information systems and to share patients medical images and data** with multi specialists and radiologists are today strong barriers to an efficient collaborative work.
- **a 3D shared environment coupled with FTTH will enable a new collaborative work pattern**

## project purpose

- develop a **real-time** collaborative medical software which allows to share patients medical records for diagnosis and medical planning
  - distance multi-specialists meeting
  - connection with Hospital Information Systems (HIS)
  - shared access to patients histories and records (DICOM images, 3D models, 2D documents)
  - advanced user interface
- carry out **participatory design method** with small group of practitioners in order to improve usability/suitability

# expected benefits

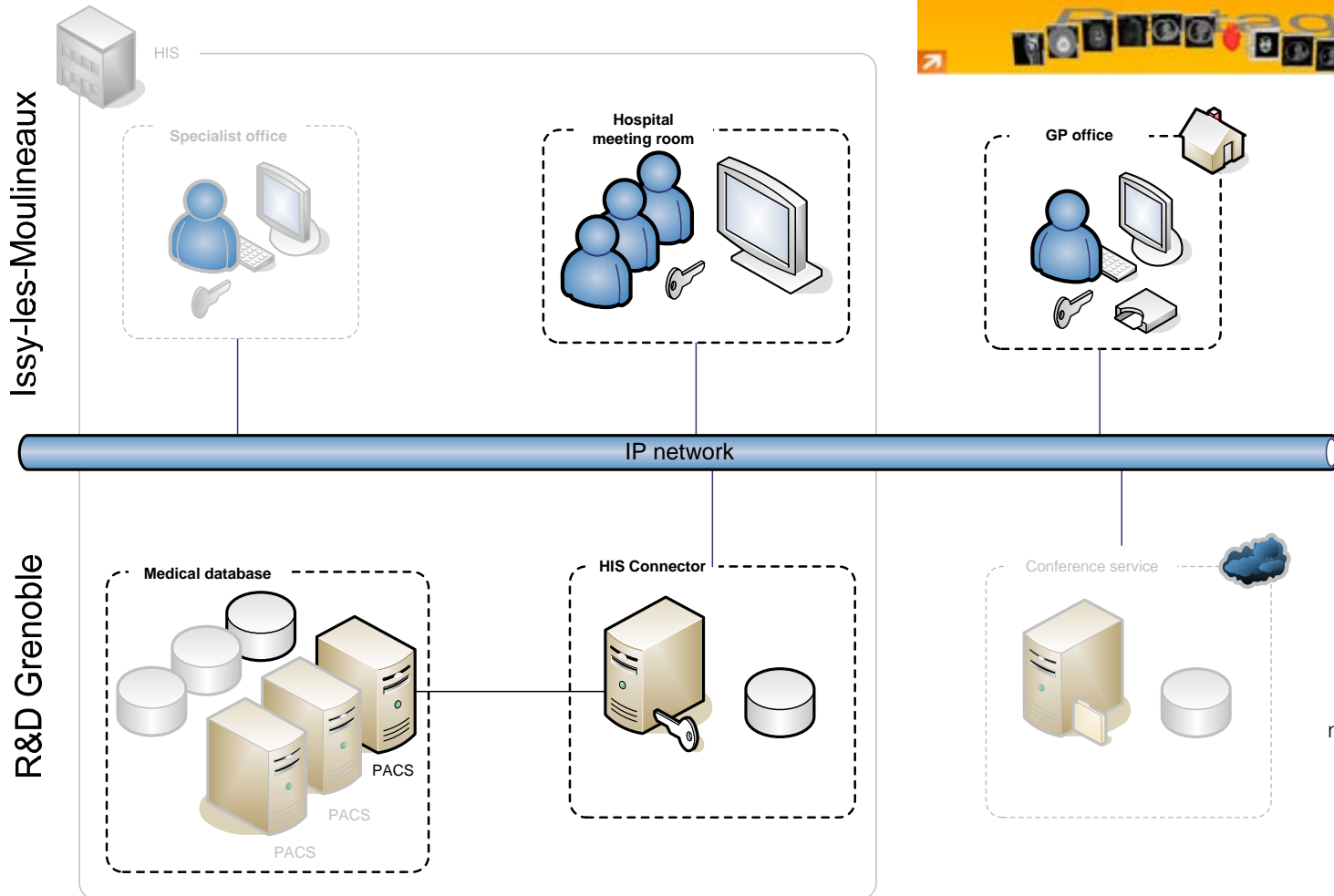
## for consumers

- improved **collaboration** between specialists and better **quality of care**
  - interconnect teams on demand, allowing to interpret and collaborate in real-time, and leading to better decisions and more effective care
  - quickly and easily share images and data
  - better communication among geographically dispersed team members
- **reduced cost** of care and improved productivity
  - eliminate the costs and delays associated with traditional film imaging
  - easily integrates with major PACS and imaging vendors (DICOM)
  - cuts downtime through enhanced and high QoS of network

## for France Telecom

- development of **new usages enabled by FTTH network**

# what will be demonstrated



**Caption**  
Grey colored = non-demonstrated

## project next steps

- conduct assessment of “My 3D Medical Desktop” with medical staff
- investigate new use-cases and other potential market segments outside the health sector

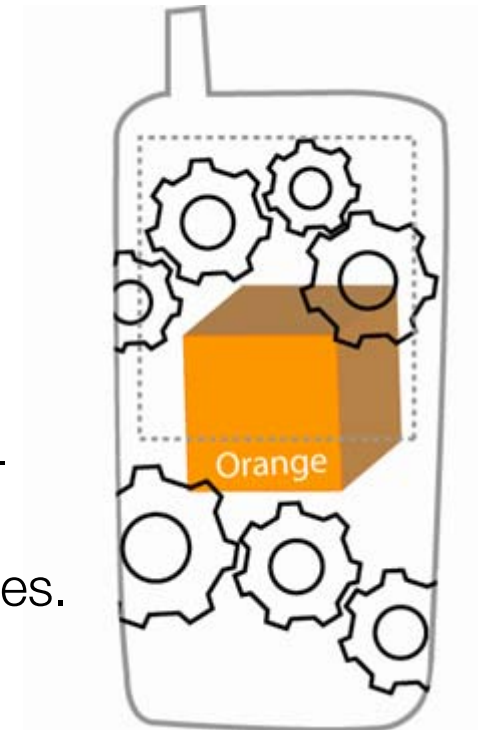
zero pain service

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## business background

- technological advances combined with business needs is increasing the amount of services that Orange are offering
- however service uptake is far from expectations — too much hassle, too much effort, **too much pain** for the customer to discover, install and use services. These are key barriers to greater data ARPU generation



## project purpose

- make the process of discovering, provisioning and managing Orange services on the mobile and PC much easier
- provide an alternative access point to improve the customer experience of using Orange services (incl. Portal Content, & applications)
- create a platform to facilitate
  - direct marketing
  - converged service offering across mobile and PC
  - deep personalisation of devices
  - over the air provisioning and customisation

# expected benefits

## for customers

- intuitive navigation
- simple installation
- wide choice of services
- rich & dynamic content
- easy cross-platform usage
- personalisation
- remote device management

## for France Telecom

- increased revenues
- product differentiation
- driver of customer retention and acquisition
- enhanced brand value
- reduced customer service costs

## what will be demonstrated

- pain free discovery, download and installation of services on a mobile device
- rich promotion of services directly to the customers device
- rollout of new applications or upgrades to devices over the air
- customisation of the device Home Screen by the customer or Orange over the air
- remote management of devices over the air
- synchronisation of services, content and data when upgrading handset



## project next steps

- external user trials
- beta launch of web interface
- port to other Operating Systems
- SIM Authentication & Security
- customising non-Orange handset to signature level for in-life devices

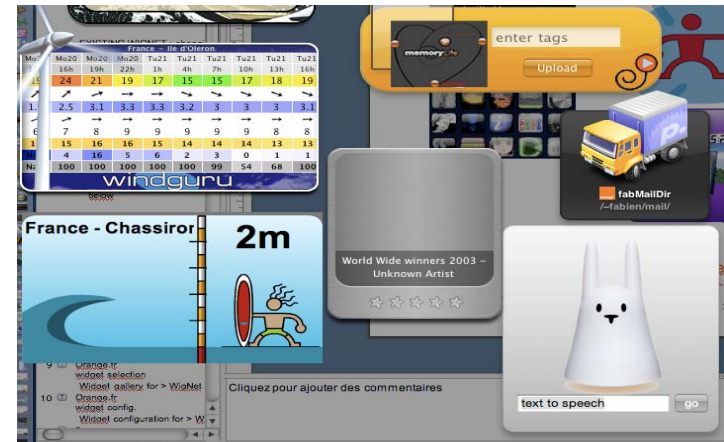


# widget zone & wigNet research@Orange labs

investor meeting  
june 21<sup>st</sup>, 2007 - Issy-les-Moulineaux

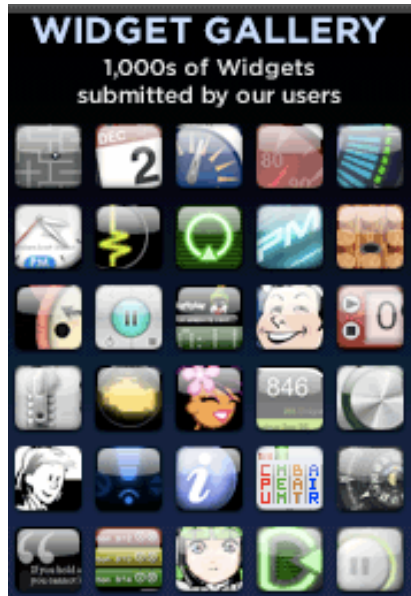
# business background

- widgets propagates on desktop, web portal, mobile, widget stations... with different management systems
  - Apple dashboard: 100 widgets/week
  - Yahoo > 4000 gadgets
  - Nokia: open source widget browser
  - WidSets: 1 million users (May'07)
  - Apple: iPhone widgets compatible
  - Opera: opening widget site
  - Ambient Devices: > 200k devices
- monetizing widgets:
  - advertising
  - premium content/subscription, ...



# project purpose

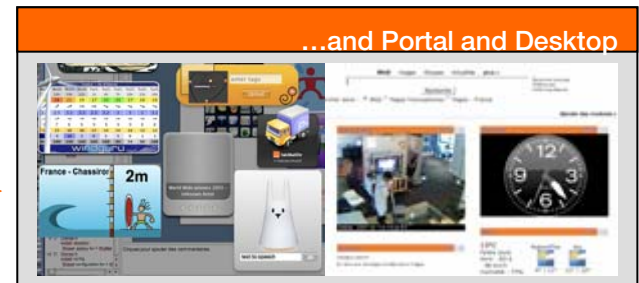
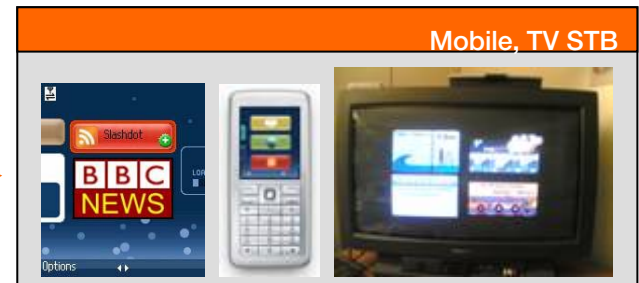
manage your widgets in one place and decide to display them on different « displays »...



[widget gallery]



[My widgets choice]  
(+ parameters)



[My displays]

# expected benefits

## for customers

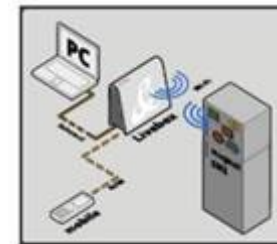
- Widget Zone:
  - simplified widget management & personalized widget content
  - discovery point for new widget services for Orange devices
  - timely introduction of new information services
- WigNet concept :
  - familiar device merging magnet & widget:  
*“Jack is having breakfast in the kitchen. A glance at the WigNet on the fridge (the traffic jam is gone), and he understands it's time to go!”*
  - network browser “concept” optimizing cost and device resources (target commercial price: 20-30 per WigNet)

## for France Telecom

- direct revenue from widget content
- advertising revenue from fixed, mobile... interfaces
- increase customer loyalty and customer switching costs
- enhance usability and satisfaction of existing services

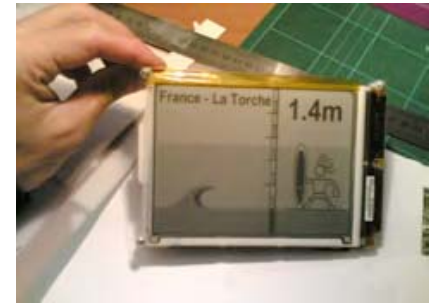
# what will be demonstrated

- **Widget Zone**  
personal website allowing widget customization and selection before viewing them on his different displays:
  - Widget Multi-publication
  - implementing “Network Browser”
- **WigNet** (widget + magnet)  
low-cost and very simple information display pushed by the Livebox via the Widget Zone
  - screen Size: 2/3” (~credit card)
  - using Zigbee interface (wireless technology)
- other “widget “ devices:
  - e-paper reader and digital photo frame



# project next steps

- complete widget multi-publication scenario:
  - Integrating mobile and TV widget solution within Widget Zone
- new WigNet prototype:
  - incorporating e-paper display: low power consumption, flexibility, readability...
  - integration with group Zigbee gateway
  - showcasing advertising business model
- whenever hardware available perform a customer trial
- leverage project know-how in order to launch commercial actions related to these services



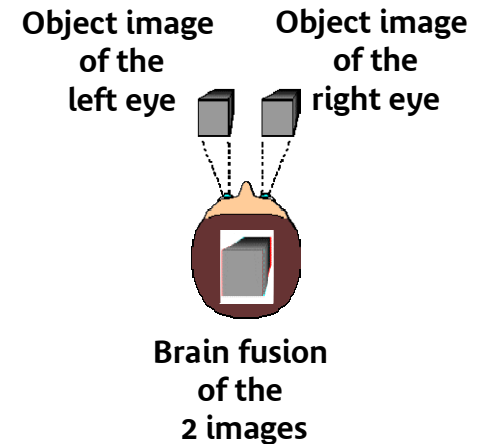
# 3D TV

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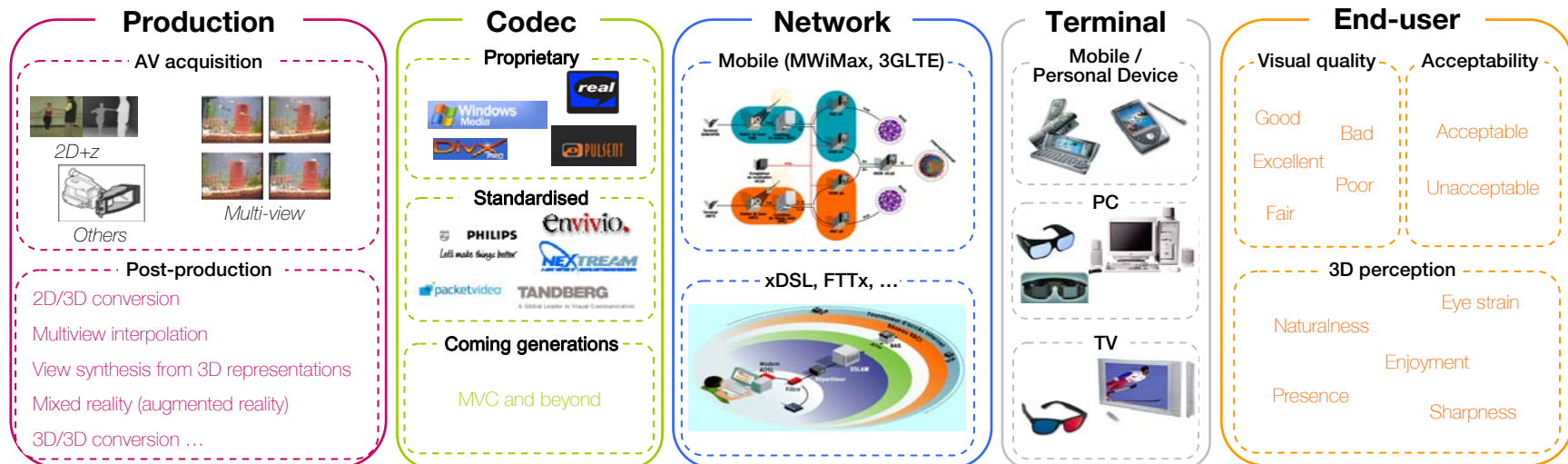
# business background

- after the launch of HDTV, we see an increased interest for 3D image, partly due to the recent availability of the first **autostereoscopic screens** (3D visualization without specific glasses)
- 3D video with stereoscopic images is using different images of the same scene for each eye, thereby reproducing the human binocular vision
- with TV, PC, mobile and PDAs equipped with 3D displays, **all image-based services could be upgraded to 3D**
- coupling 3D video technologies with high bandwidth networks (FTTx, 3G, etc.) gives FT the opportunity of **new image-based business**



# project purpose

- 3D services will emerge only when ecosystem cooperation is achieved
- project purpose is to help remove main obstacles such as:
  - contents generation, particularly 3D video capture
  - representation and coding of 3D videos in the context of current standardization
  - development of end-to-end 3D video coding architectures with QoS considerations
  - identification and qualification of 3D equipments (terminals, displays, codecs)
  - assessment of end-user perception (naturalness, presence, eye-strain, fatigue)
  - liaison with key players : manufacturers, content providers, academics, etc.



# expected benefits

- benefit for users
  - full immersion in images
  - new sensations, new emotions
  - new ways to display content (for residential and professional markets)
- benefits for FT
  - 3D images is potentially a killer application for new networks (FTTX / 3G...)
  - customer acquisition and retention for network services
  - competitive advantage for our content based services: VOD, Games...
  - FT positioning as a leader in innovation

## what will be demonstrated

- various content will be presented on **Autostereoscopic Displays** allowing to see in 3D without using any glasses.



screen image simulated



## project next steps

- set up end-to-end prototypes
- focus on self-produced or computer generated contents (games, online services...)
- longer term 3D services: live 3DTV, user interaction ...
- provide technical expertise and recommendations to our content providers partners



# 3D Sound

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# business background

- penetration and usage of **audioconference services** for mass market and business market is limited because perceived quality often comes short of expectations
- **3D interactive gaming** market, including online **massively multigamers games** (MMG) is growing; yet customer experience with sound is not matching the quality of 3D graphics
- quantum leap improvement in sound quality may improve **service differentiation** and **spur usage**

## project purpose

- beyond stereo or 5.1 standards, explore High Order Ambisonics (HOA) technology to enrich existing and future services such as **3D teleconferencing and sharing of spatial ambiances**
  - 3D audio capture and recording
  - 3D reproduction with effective sound spatialization over any loudspeaker system or headphones
- define and promote an universal, flexible and scalable **3D Audio Format** for future contents and enriched uses (concerts, theatre, interactive 3D navigation, etc.), paving the way for manufacturer's adoption

# expected benefits

## for customers

- spatialized sound to improve perceived quality
- mass market:
  - capture the spatial sound ambience of an event and share it with distant friends or family by immersive sound reproduction; sharing high resolution, auto-produced content can take benefit of FTTH
- business market:
  - improve professional teleconference experience. Spatial sound capture and rendering enhance intelligibility, comfort, and sensation of presence

## for France Telecom

- increased usage for advanced teleconference services
- differentiating from competition with high quality and innovative services
- promotion of high bitrate networks such as FTTH

## what will be demonstrated

- a multi-sensor sphere (the HOA microphone) placed in the exhibition area will record the ambience, talks and various sound events in 3D. Then the captured sound field will be recreated and visitors will be immersed in the same auditory sensations (localization, envelopment effects) that they experienced. It is suggested that the sound space could be simultaneously recreated at a distant place to share it with family or colleagues
- the flexible sound restitution is highlighted bringing various listening situations into play: reproduction over headphones (with adaptation to the head movements), or on standard or extended ITU surround sound systems (from 5 to 8 loudspeakers).
- examples of previously recorded music concerts, nature ambiances, or amazing 3D sound effects also illustrate the immersive rendering.

## project next steps

- continue work on 3D microphone design and prototyping
- prototype easy-to-use "plug'n play" devices
- develop specific 3D audio compression algorithms
- standardize the HOA format (including compressed form)
- have the technology assessed by sound engineers
- integrate the technology in a whole production-transmission-delivery chain
- work on echo cancellation for future spatialized teleconference