

# Business and technical challenges around CAT-iq technology, operator perspective

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# 1 ■ Business challenges

- From proprietary to "Off-the shelf" CAT-iq 2.0 devices
- 2011/2012 activities
- Next steps

# In 2006, Orange went successfully to the market with a USB/DECT dongle + HD handset

- **HD voice is offered** to Orange VOIP customers, **provided they have a Livephone.**
  - Full HD communications = between 2 Orange VoIP customers both equipped with a Livephone, on the same VoIP platform
  - Non Full HD communications ensure anyway a superior sound quality compared to traditional DECT phones
- **Livephones** are either
  - Sold as **cash-and-carry** products
  - **Bundled** with the Livebox and rented

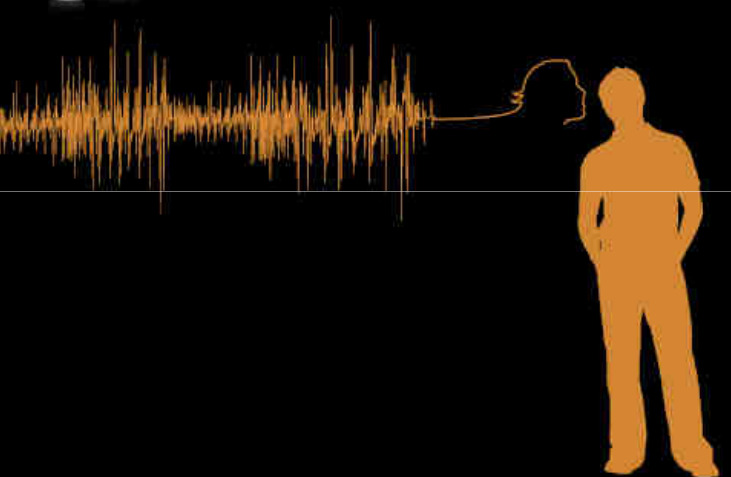


- Communication is based on the **voice quality** and on the **closeness** that HD communication brings

avec la livebox,  
vous n'avez jamais senti  
vos correspondants aussi proches

**voix haute définition**  
chez vous, avec la livebox et le téléphone livephone,  
profitez d'une qualité de son inédite

autour de 1000 euros avec Livebox + Livebox HD et le téléphone à 25 000 exemplaires



1014 (appel gratuit depuis une ligne fixe France Télécom)  
agences France Télécom

open orange

Offres soumises à conditions, valables en France métropolitaine, réservées aux abonnés internet (dès 1 mégabit IP) et téléphone fixe débit.  
Livebox et téléphone livephone nécessitent un débit et réception. Consultez et lisez le point de vente.  
(\*) Le Livebox et le téléphone livephone sont aussi disponibles séparément.  
France Télécom, SA au capital de 10 430 000 000 € - RCS Paris 330 139 888

# Moving to a success, with a regularly renewed Livephone portfolio and an increasing number of countries involved

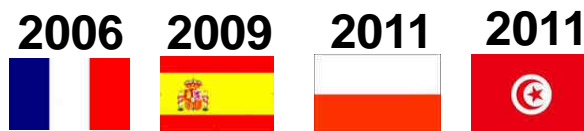
**17** Livephones launched



**4** suppliers involved



**4** countries covered



Ongoing

**800 000**  
customers

# 2011/2012 : Reaching a maturity level via CAT-iq standard.

From 2012

Customer plugs an **Orange CAT-iq 2.0 dongle** on the Livebox



Customers with new gateways don't need any dongle as **CAT-iq 2.0 base is inside** the Livebox...



... but customers already equipped with a gateway (8M) need the **Orange CAT-iq 2.0 dongle** as an accessory



June 2011: with the launch of the Livephone Samsung SMT-W3510, Orange is the first operator worldwide to bring a **CAT-iq 2.0 phone** to the market

In 2012, several gateways embedding CAT-iq 2.0 will be launched in several countries, both on the B2C and B2B markets.

# Now that we are ready to move to a standard IP world... why should the operator do so?

- **PSTN still generates good revenue** while VoIP is still both defensive and anticipative (HD for ex.). The operator is on a **network dilemma**: investment on new networks, hence IP telephony, should be justified by **new services/revenue**.
- As of today, **what is CAT-iq about for the end customer?** We want to define a real customer value proposition, with a set of **services** enabled by CAT-iq
  - focusing on **key customers benefits** (not focusing on technology)
  - easy to explain by salespeople, to understand by customers and to deliver by Orange
  - generating value and revenues

**Let's work together to create this value proposal!**

- From a pure device perspective, CAT-iq 2.0 will allow to sell more affordable HD handsets. This will **democratize fixed HD voice**, which is key in a context where from 2012 we can expect to interconnect our fixed and mobile HD networks.

# Business challenges – next steps

## Bring new services and devices to the customer

- Re-use mobile HD logo for fixed HD telephony
  - Orange will support at DECT Forum + GSMA level
  - Orange proposal : "HD" fixed logo for a device = CAT-iq 2.0 certified
- Push Mobile – Fixed HD interoperability
  - Orange HD mobile community is growing fast
  - Complex topic, technical discussions required within Core Network suppliers.
- Offer new devices and services
  - Continue deployment of CAT-iq services (Multicom HD) consistently with CAT-iq roadmap (via HGI operators discussions)
  - Allow new devices : data/video enabled, remote control devices, android devices. CAT-iq 2.0 voice only devices is a starting point.
  - Allow new applications like Home Automation via DECT ULE (Home detectors).

## 2 ■ Technical challenges

- CAT-iq certification, a must have
- Next technical steps
- Integration of the technology into Gateways

# Technical challenges - CAT-iq certification, a must have

- required toward our suppliers (device & gateways)
- a **serious** certif pgm => Guarantees the device QoS in very close to reality conditions (Radio, Audio, Protocol)
- a "**full telephony**" approach (mandatory features)
- all the work done with chipsets reference implementations **insures product delivery**
- some weaknesses detected by Orange on some 2.0 certified devices=> retro-actions proposed via ETSI/DF/HGI in 2.0/2.1 and interop sessions
- certification does not make everything : suppliers should be careful with user interface choices (good and bad surprises)

# Technical challenges – What's next ?

- CAT-iq 2.1 successor of CAT-iq 2.0
  - Covers the very few weaknesses detected on certified devices
  - Extends the telephony services coverage (Diagnostic, SMS, DTAM, Green etc..)
  
- CAT-iq 3.x and DECT ULE
  - ULE Key point : concentrate on "consensus" applications and use cases.
  
- Work a real Mobile-Fixed synchronized address book.
  
- a common simple sniffer tool shared among the DECT community.
  
- Share Handset user interface guidelines among operators.  
"Good practice" guidelines. Some examples :
  - Double call mgt via green/red keys, remove R key, very accessible pairing screens, unified logs via green key, ...

# Technical challenges - Integration into gateways challenges

- Make the life of GW supplier easier :
  - GW supplier is more "an integrator" than "a DECT expert", with high roadmap pressure.
  - CAT-iq/ULE chipsets stacks to include "built-in" as many certified features as possible
- Think "Future-proof " from the start:
  - CAT-iq chipsets network fw upgradable to newer profiles (CAT-iq 3.0, 4.0...)
  - CAT-iq chipsets network fw upgradable to ULE applications.
- Think about "non-regression" fw testing. A gateway embeds up to 15 different technologies...
- Open API is an interesting approach.