

## Summary

# Executive summary

From lagging behind most other developed countries in both IT and mobile development at the end of the 1990s, Japan today has the world's most innovative and advanced mobile market. This report discusses the road that led there, and the choices along the way that made this remarkable development possible.

It all started with the introduction of mobile Internet on the existing 2G networks in 1999. The Japanese operators worked closely with the terminal makers and service providers during two years of development, and at the day of the launch they could offer a complete concept with attractive services, friendly marketing, fun terminals, simple pricing and clear interfaces. The business model was designed to offer contents providers a safe business environment with assured revenue from the very first customer in order to ensure the availability of exciting services, and very soon the Japanese mobile users were treated to an abundance of news, games, shopping, entertainment, video and photo functions, localization services and e-mail; all on a network with a transmission speed of 9.6 kbps.

With mobile internet came also new possibilities for misuse, and the operators, terminal makers and regulators had to deal with spam, scams, viruses, sexual offenders and camera phone abuse. In spite of this the market flourished and the mobile phone became an extension of most users' personalities; an omnipresent terminal for communication, information, music and multimedia.

When it was time to introduce 3G in 2001 and 2002, the operators choose fundamentally different marketing strategies. NTT DoCoMo, on WCDMA, chose to launch early, and this time focused on the technical aspects of the new system, marketing it primarily towards business customers. KDDI on the other hand, with the mobile brand au, having selected the considerably slower network standard CDMA2000, chose to wait until they had extensive coverage and followed the same marketing model as with mobile internet, namely to design

their campaign for the private users, focus on services, terminals and fun, and ban any techno jargon in their presentations.

The result chocked even the most seasoned analysts: just a couple of months after their 3G launch, KDDI had gained over one million subscribers, while DoCoMo, who had launched more than 9 months earlier, only had one tenth of that.

Unlike what all strategists had speculated beforehand, the users did not throw themselves over video telephony or flock to the commercial video clips available for download. Instead, just like for mobile internet on 2G, it was peer-to-peer, i.e. contents produced by the subscribers themselves and forwarded among friends and family, that was the killer application. New features were quickly applied to personalise e-mail messages and edit media contents, and periphery products were used to print or transfer them to other outlets.

Service providers took notice of the fact that the mobile terminals have become something that few users ever left at more than arm's length, and started loading up the terminals with other options. It became possible to pay, check in, enter, and travel just by waving the phone in front of sensors. The phones have also become safety terminals when they are used for tracking the whereabouts of children, or function as one-button alarms when the holder needs urgent assistance. In the other end, the mobile phone can be the remote control and viewer for network cameras, robots and other electronics in the home, and even be a satellite terminal for the home PC.

The Japanese industry is now since several years hard at work developing 4G, with field trials having commenced. The long-term vision shared by industry, academia and policy makers alike is however looking beyond mobile, with the keyword being ubiquitous, i.e. that computers become integrated with our environment, making everyday things around us connected and intelligent. This raises a number of technical, ethical and social challenges, which are currently being debated and discussed in all IT related organisations and forums around Japan.