



# Sharing the benefits

Forward-looking mobile and fixed-line telecom operators are turning to network sharing as a creative way to bring better services more economically to their customers

*By Jorge Felicidad*

WITH THE EXPENSES INVOLVED IN BUILDING, upgrading, operating and maintaining telecommunications networks continuing to escalate over the past decade, it could only be a matter of time before carriers found more creative ways to fulfill their development agenda at lower cost.

One of those ways has been the development of infrastructure-sharing arrangements implemented by a growing number of forward-looking mobile and fixed-line network operators.

In a report, management consulting firm Booz Allen Hamilton said network sharing was first implemented in 2001. "With the hype of 3G licensing in Europe and the big investments made in licence acquisition, many operators were under pressure to share deployment costs and thus share infrastructure," Booz Allen Hamilton said.

Anticipating the rapid growth of mobile internet data usage, operators 3 UK and T-Mobile pooled their 3G infrastructure in December 2001 in a 50-50 joint venture company called Mobile Broadband Network Ltd (MBNL).

The purpose was to create Britain's best 3G network more rapidly and more efficiently than either party could do alone. The resulting shared network requires fewer masts, consumes less energy and provides customers with superior mobile broadband service.

MBNL awarded Nokia Siemens Networks a GBP400 million (USD600 million) contract that included the provision of 3G radio network infrastructure, mobile network planning, implementation, optimisation and maintenance. The joint network infrastructure programme was slated for completion at the end of last year.

"The growth in mobile broadband usage clearly provides challenges for networks," Emin Gurdenli, technical director at T-Mobile UK, said. "These are challenges we have anticipated."

In August 2004, Hutchison 3G Australia and Telstra Corporation committed to jointly own and operate a 2100-megahertz 3G network. Hutchison 3G later merged with Vodafone Australia to establish Vodafone Hutchison Australia (VHA).

## “3 Austria has entered a deal whereby other companies will modernise their 3G network then they will lease back the infrastructure and operate it.”

Last October, Telstra and VHA agreed to conclude their network sharing deal next year. Following that resolution, the network assets and the spectrum from the shared 2100MHz network will be incorporated into other networks that Telstra and VHA operate.

Booz Allen Hamilton said: “Both fixed-line and mobile operators should consider infrastructure-sharing as a medium to save costs and focus more attention on customer-facing activities, in which innovation and differentiation are the main competitive advantages.”

Amid discussions on how difficult it will be to get funding for constructing multiple 4G networks worldwide, market research firm Ovum has urged the telecommunications industry to start contemplating a future where network sharing is the norm.

ABI Research indicated that there were more than 500 3G network commitments, and over 300 4G announcements (both LTE and WiMAX) worldwide as of November last year. That equates to more than two billion of the world’s population being covered by high-speed data networks.

In a report, management consulting firm Oliver Wyman provided five operating models typically considered by carriers looking to forge network-sharing deals. These are:

1) A joint venture (for assets) between operators, in which carriers consolidate their existing networks in a joint asset company, whose day-to-day operations and staff are retained by the two operators.

2) A joint venture plus common service company, in which the carriers jointly build or combine their existing networks in a joint company like the first model. Day-to-day operations and staff, however, are transferred to a single service company, also a joint venture.

3) Vendor-led network sharing and operations and maintenance outsourcing, in which operations and staff of a joint-asset company are the responsibility of an outside contractor or managed-services vendor.

4) Managed capacity, in which network ownership is transferred to a vendor. Operators pay the vendor on a usage or capacity provision basis. Operations and staff are outsourced.

5) One operator becomes a mobile virtual network operator, in which one of the carriers in a joint-asset company relinquishes its operations and becomes an MVNO. This is an operator that does not have its own licensed frequency allocation or radio spectrum. Instead, it buys capacity and

services wholesale from an existing carrier and resells them under its own brand.

According to Oliver Wyman, no network-sharing operating model is perfect as each model comes with trade-offs. “Differences in these trade-offs originate from choices about who in the new partnership will own which assets, handle operations and maintenance services, and be responsible for employment of the staff teams,” it said in a report.

A creative deal was forged on 15 December last year between Chinese telecommunications equipment manufacturer ZTE, Hutchison Whampoa and CDB Leasing Co, a unit of China Development Bank for the network assets of mobile operator 3 Austria.

Under this arrangement, CDB Leasing and ZTE would take the 3G network and modernise it, while 3 Austria will lease back the infrastructure and operate it. “This step helps us to reduce costs long-term and at the same time improves our capacity,” Jan Trionow, CEO of 3 Austria said. “We are convinced that this model will give us an advantage over our competitors and massively benefit our customers.”

With this deal, 3 Austria will be able to pass back the reduced costs in terms of lower tariffs to its customers and 3 Austria users will also have state-of-the-art technologies at their disposal.

According to Ovum senior analyst Emeka Obiodu, network sharing is the inevitable way forward: “If taken to its logical conclusion, this new scenario can lead to the prospect of a single mobile network which is then shared by multiple service providers in the market – effectively the same format used for utility services in other infrastructure-heavy sectors such as fixed-line telephones, railways, electricity and gas networks.” 

