

largest telecoms firm, declined by 8%. Its losses were greatest in the New York metropolitan area, where it faces the most competition from cable operators offering voice services, says Stephan Beckert of TeleGeography, a market-research firm.

As cable operators offer customers the "triple play" of voice, broadband and television, telecoms operators have concluded that their best defence is to respond in kind and also to throw in wireless, which many cable operators are not yet able to offer. Customers who sign up for a bundle of services and its associated discount cannot defect to a rival provider of any one of the services without losing the discount. "We make the product more sticky—customers don't seem to leave," says Mr Whitacre. Similarly, cable operators are using bundles to protect their core business, which is not voice but television, as it, too, comes under attack from satellite-TV providers and now telecoms operators.

Another benefit of bundling everything together is that it reduces advertising, customer-acquisition and other marketing

costs, because all the services can be advertised together under a single brand. That is why France Telecom recently rebranded its Wanadoo broadband division and Equant corporate-networks division to align them with Orange, its far stronger mobile-phone brand. This will allow the company to sell bundles of services to both consumers and businesses under a single brand. "It cost a lot to support all those brands, so it's very rational to choose the most popular brand in the collection to support all our products," says Mr Lombard. Similarly, doing away with the old SBC, BellSouth and Cingular brands in favour of the much stronger AT&T brand is "a huge opportunity for us," says Mr Harn.

#### Shades of 3G?

Convergence and bundling, in short, are two sides of the same coin. The convergence of multiple networks makes bundles of services cheaper to provide; and the business logic of bundling makes the cost of building new, converged networks easier to justify. But anyone familiar with

the telecoms industry may be experiencing a sense of déjà vu. This is the same industry that spent tens of billions of dollars building new fibre-optic networks in the late 1990s, in anticipation of a surge in traffic that never materialised. The result was a spectacular crash.

Meanwhile, European operators paid around €100 billion for licences to build new high-speed "third-generation" (3G) mobile networks. They hoped that as revenue from voice calls levelled off, the new networks would open up a lucrative new data-services market. But take-up of data services fell far short of expectations, and 3G's real value proved to be much less exciting: an ability to cut operating costs and provide lots of cheap voice capacity. This caused huge write-downs in the value of the licences. Both of these episodes are now regarded as embarrassing collective hallucinations over which the industry prefers to draw a veil. But might the same thing happen again with convergence?

"What problem is convergence solving?" asks Andrew Odlyzko, an expert in

## All things to all men

### Two other kinds of convergence

PART of the attraction of convergence is that it covers so many different things. "If you ask five people what it means, you'll get seven different viewpoints," says Stephen Bye, who is in charge of "wireless and converged services" at AT&T. In addition to the broad trend of convergence between voice, data and entertainment services, and the networks and companies that deliver them, the term is also used in at least two other senses that are worth a brief glance.

The first is the convergence between the worlds of telecoms and computing, otherwise known as information technology (IT). These have long been two industries separated by a common love of technology. For many years there was networking (the telecoms way (generally expensive, proprietary and reliable)) and the computer way (generally cheap, standards-based and sometimes flaky). But now the two worlds are starting to look more similar as Internet standards and technologies spread.

Telecoms networks are becoming ever

more reliant on software and complex computer systems to handle service delivery; computing, meanwhile, is beginning to look more and more like telecoms as software is increasingly delivered as a network service and companies are increasingly dependent on their networks to keep things running. Hence the advance of the big systems integrators into telecoms services; and the move of telecoms firms into IT-services. This trend is real enough, but it is not central to most telecoms operators' strategies.

#### A remote control for your life

The second is "device convergence". Everything from a laptop to a mobile phone to a television to a games console is now, arguably, the same kind of device: each consists of a microprocessor, a screen, some storage, an input device and a network connection. You can make phone calls on your laptop, play games on your mobile phone and watch videos on your games console. This has prompted much speculation about con-

vergence on a single powerful device that can perform all of these functions.

But although the various kinds of digital device look increasingly similar on the inside, they look increasingly different on the outside. Just look at the huge range of mobile devices, from basic handsets that simply deliver voice calls to BlackBerry-type e-mail terminals and multimedia handsets that let you watch TV on the move. "We have to be extremely careful that we don't go in the Swiss army knife kind of direction where we lose focus on what the consumer wants," says Olli-Pekka Kallalavuo, the boss of Nokia, the world's biggest handset-maker.

Jack-of-all-trades handsets have generally not sold very well. So Nokia's range of "converged" devices, the Nseries, consists of a variety of devices with specific strengths: as a music-player, a mobile TV or a camcorder, in addition to being a phone. The trend is not towards a single converged device, but towards a greater diversity of hybrid devices. Not so much convergence, then, as divergence.