

# **Summary and Table of Contents**

## **Broadband via Satellite 2004**

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## **Summary of Broadband via Satellite 2004**

Our latest report follows on from our Internet via Satellite series and covers the market for two-way and hybrid broadband satellite communications world-wide.

Broadband via Satellite 2004 provides an overall structural analysis of the industry including its future direction, shape and size. The market is detailed on a region-by-region basis including Asia/Australasia, the Middle East, Africa, Europe, North America and Latin America.

It details all of the main equipment vendors and service providers including estimates of the installed base of units. A detailed, but easy to comprehend, analysis is provided of the main technology developments and standards issues.

Broadband via Satellite 2004 covers all of the main broadband satellite service providers including satellite operators, carriers, teleports and re-sellers as well as the next generation platforms such as IPStar, Spaceway, Skyplex and Wildblue.

The report concludes that two-way broadband satellite communications is emerging as a powerful extension to traditional VSAT and SCPC services. Widespread innovation amongst vendors, service providers and users is resulting in new and extended opportunities often where they are least expected.

On the other hand, we retain a wait-and-see view on consumer 2-way satellite broadband. The addressable market for this service in developed countries is now rapidly shrinking.

Broadband via Satellite 2004 is published at a critical stage in the development of the industry, faced with continuing uncertainty about the future of new multimedia satellites, ownership of key service providers and vendors and market maturity of mainstream satellite services.

It realistically assesses current developments, showing just how an uncertain environment it is.

The report makes a clear distinction between enterprise networks and other forms of satellite-based broadband access.

Broadband via Satellite 2004 looks at new opportunities arising from consumer web browsing via broadband satellite in the form of tele-centres and the extension of universal service obligations through hybrid voice and Internet thin route rural communications platforms.

Broadband via Satellite 2004 is 200 pages long and contains 55 charts and tables. It details some 233 vendors, service providers and re-sellers.

Broadband via Satellite 2004 is an invaluable tool for professionals involved in satellite communications including those in general management, business development, marketing, sales, strategic management, investment, finance and equity, regulatory agencies and R&D organisations.

Broadband via Satellite 2004 is published by DTT Consulting, a business that has been dedicated to management information, market research and consulting since it was founded in 1983. It follows on from many years of market research in Ka-band services and Internet via satellite.

Our recent market research reports include Satellite communications in Iraq, Satellite Communications in 21 Countries in Central and Eastern Europe and Internet via Satellite and Satellite Communications in the Middle East.

Our past reports on IP over satellite include The Ka-Band Report, Internet via Satellite, Internet via Satellite 1999, Internet via Satellite 2000 and Internet via Satellite 2001.

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## Report Summary, Broadband via Satellite 2004

We conclude from this report that broadband satellite communications is a healthy marketplace, extending and opening up new niche market opportunities for what has generally been regarded as the VSAT industry.

The report estimates that the installed base of 2-way satellite broadband terminals worldwide, excluding enterprise networks, is around 331,000 units.

However, the addressable market for consumer broadband access is rapidly shrinking and the window of opportunity for the satellite industry is closing.

Moreover, the experience of hybrid access since 1996, thoroughly detailed in the report, suggests that broadband satellite is not an attractive proposition for consumers primarily using it for web browsing.

It remains possible that new consumer services such as Wildblue may stimulate the market but it is increasingly hard to find supporting evidence.

The broadband satellite industry has, so far, emerged from a fusion of hybrid access (DVB-S) and traditional VSAT transactional 2-way technology and markets. Its sales figures reflect levels of demand in both of these two sectors.

Falling costs and expansion of service capabilities have allowed the industry to grow at about 2-6% a year (in terms of revenues). By the standards of both the satellite industry in general and telecoms overall, that is an achievement not to be scoffed at.

In the worst possible scenario we expect continued, steady and modest growth in demand based on existing technology platforms backed by incremental improvements in performance.

That growth will largely be centered on three market sub-segments:

- The Enterprise, SME and SOHO sectors with a combination of LAN, VPN and full private networks.
- Continued expansion into the backhaul sector covering Wi-Fi, tele-centres, Internet cafes and so on. This overlaps and competes with traditional SCPC point-to-point services.
- Meeting the demand for de facto extension of Universal Service Obligations from voice to data. This includes such areas as education, e-government and thin route rural communications.

Our view of consumer satellite broadband is hard. The view here in Europe is that the only consumer offering is hybrid access – although long established, this remains somewhat of a Cinderella business.

Without a consumer sector, broadband satellite communications is largely a network business. It is not about web browsing.

Moreover, whilst both Starband and Direcway are touted as consumer or residential services in the USA, we believe that many of the users fall into the SOHO/SME professional use categories. Moreover, much of what constitutes consumer satellite broadband in North America is still hybrid access.

Indeed, our conclusion is that there isn't currently any actual, current and discernable market for consumer two-way satellite broadband outside of the USA.

That view raises the question of market uncertainty. We will not know until quite well into 2005 whether Wildblue take-up is significant.

Likewise, there remains a massive amount of uncertainty about HNS and Spaceway. Conflicting messages from the DirecTV Group lead us to the simple conclusion that there is a 50:50 chance that Spaceway broadband services will fly – either they will or they won't.

In general, a pattern has emerged of continuing delays in launch of new broadband satellites. The PR puffery industry usually pushes problems with continuing needs to test the satellites as the reason. More rare is the tacit admission of insecurity – the market needs to mature (or develop) before launch.

When we started researching this report in January 2004, we expected that all but Inmarsat 4 (and the 2nd Spaceway satellite) of the broadband satellites would be launched in 2004. By June 2004, Spaceway had been put back to 2005 and we expected IPStar to be likewise delayed.

Spaceway, like HNS, is up for sale. We therefore expect significant industry structure and ownership changes over the next year. HNS may end up being broken up. Likewise, future control and ownership of SatLynx looks uncertain. Who is the power behind SatLynx?

In January 2004 we expected further consolidation of the satellite operating sector through mergers and acquisitions. By mid-2004, no such new developments had been announced and increasingly, the trend now looks to be one of purchase by private equity firms. The industry looks increasingly to be one run as a cash cow.

That is not a climate favourable to investment in big broadband projects.

So far the two-way broadband sector has emerged centered on wholesaling of generic platforms by large satellite operators – Intelsat, New Skies (IPSys), PanAmSat (Spotbytes), SES (SatLynx, Americom2Home) and Eutelsat (D-Star). Spaceway, historically, is no more than a variation of this model.

The general consensus in the industry is that this is the way forward. The two main equipment vendors, HNS and Gilat, have long developed their own service platforms but Gilat no longer intends to launch new service platforms. Likewise, there is no guarantee that HNS will continue to operate its Direcway platforms in the Americas and Europe (and in India, through the Hughes Escort JV).

Our best guess is that the satellite operators are keen to get their hands on the Direcway service platforms but less so with the Gilat service investments.

On the other hand, some in the industry have commented to us that the wholesale model is not that good. The satellite operators are too distant from their final end-users and haven't fully thought through what business they are in.

Broadband via Satellite 2004 identifies numerous examples of stand alone broadband satellite service providers operating their own shared hubs and targeting niche markets – either geographically or by service and equipment vendor type. Thus the sector appears to be following the example of the hybrid access market.

Some of these are the well known teleport operators (Telespazio, BT Broadcast, etc.) but often entrepreneurial start up ventures either operating their own mini-teleports or co-locating hubs on the premises of larger teleports.

There are a number of new niches in broadband satellite communications emerging.

The need for portable broadband terminals, either of the flyaway kind or vehicle mounted, centres upon disaster management and news gathering. A key market factor here have been work within the UN and relief agencies to get instant type approval, regulatory clearance and exemptions from sanctions in quickly deploying terminals. The earthquake in Bam in Iran in 2003 was a clear driver.

However, there are broader applications where temporary facilities are required – for example, in technical monitoring of Formula 1 motor vehicles at races.

We also perceive a growing demand for the application in such areas as Homeland Security, SNG, fire and rescue services, non-core military communications, oil and gas exploration and quick-fix backup solutions.

Broadband via Satellite 2004 has also identified rural trading as involving large scale deployment of satellite broadband. The model of e-Choupal in India is probably the best current example. That model needs to be exploited by commodity traders, wholesalers and retailers.

The report also indicates growing demand for content distribution services within the overall framework of broadband satellite. The old model involving content distribution to cache web material on ISP servers is pretty well dead.

However, as DSL networks and cable networks increasingly offer access rates above 1 MBit/s, there is a view that true VoD will emerge as a market driver. Future shortage of trunk fibre capacity may well force the Internet industry to prioritize and ration use of bandwidth in favour of VoIP and web access.

Content providers may well then find it more economic to cache VoD material closer to the end user and, indeed, keep control of intellectual property rights, release windows and so on.

Whilst there is uncertainty over the future of consumer satellite broadband and the Spaceway project, the vendor sector has had an impressive record in the last few years in incremental improvements in performance of equipment. This will continue, even without Spaceway.

To name just a handful of recent and near-term increment improvements we would include remote terminal diagnostics, fast hopping, effective provision of VPN capabilities, VoIP, self hosting modems, inter-operable hubs and DVB-S2.

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