Join Now | My Account | Help

TelecomClick™
an IndustryClick community

DigitalMediaClick go
an IndustryClick community

| Buy & Sell | Magazine Rack | News & Analysis | Key Web Sites | Events | Training | Discussions | Research |

I want to…

Search: [   ] in: [Satellite Broadband ▼] go Tips |

WIRELESS REVIEW MAGAZINE

Article

Brought to you b

The best
in telec

Print-friendly form

E-mail this article

The humble teleport

by SATELLITE BROADBAND STAFF

Satellite Broadband, Jan 1, 2001

How the not-so-sexy teleport manages major traffic jams.

To some people, teleports arouse a deep sense of awe and wonder.

The sight of huge structures, almost visibly pulsing with power, like trumpets communicating with the heavens is breath taking.

Others see a means to an end (or an end-to-end, if you pardon the pun) that's complicated, and best left to the techies.

Whatever your point of view, no one can deny that the un-sexy teleport segme business is just as important to our industry as the glamorous satellites they se there's just as much change in the teleport business that will have as much to the future of the satellite industry.

The teleport mystique A teleport is a telecommunications hub, with a group of antennas accessing regional and national networks, interfacing to both narrow broadband communications systems connected by microwave, cable and fiber.

But according to the World Teleport Association in Washington, the teleport is r than just an inter-connected circuit, "For nearly three decades, teleports have in the export and import of the weightless cargo - information."

The teleport has now evolved to become a port in the traditional sense of the w hence exerting a gravitational pull for real estate projects, urban redevelopmer variety of other economic development efforts. The teletropolis is an economic development vehicle that, in the same way as seaports and airports, becomes urban development that encourages high-tech industries and creates jobs in th

Just two examples of operating teletropolises are in Japan: Tokyo Teleport and Media Port. Japan has declared its plans to overtake the United States in Interr infrastructure. Both sites are built on reclaimed land in harbours at a cost meas billions of dollars, and are real estate developments to create new city centers commercial, residential and recreational space. All are interconnected by a fibe and served by an on-site telecommunications center with its own earth station

Stephen G. Tom, president of Teleport Consulting Group International and also of the World Teleports Association, has an interesting perspective on the chang business of satellites and teleports. "The Internet has changed the face of satel communications and the traffic carried through the world's teleports and satelli systems. But the Internet was also clearly enabled by the digitization of satellit communications, thereby creating the platform for IP.

Bytes

General

"While satellites do not have the bandwidth to match that of fiber routes, satell rapidly deployed to service many places that fiber optics will never reach. That' say that one technology is better than the other, rather that it emphasizes the hybrid fiber satellite networks that harness the strengths of both technologies t the marketplace," says Tom.

Tom believes there will be dramatic technological developments in satellite communications over the next three years to tackle the balance between the a bandwidth being consumed by Internet traffic with the scarcity of satellite capa some regions of the world. He foresees the development of new bandwidth allo technologies, so that circuits will be dynamically allocated based upon utilizatio Instead of buying specific bandwidth on a satellite (which often results in a lot capacity), you will buy overall circuit performance from satellite operators rathe discrete transponder allocations. At the teleport, the new bandwidth allocation technologies will have to be complemented with systems that will automate mu current-day teleport function. "Teleports are still by-and-large manual switch a operations. Simultaneously with a conversion to automatic bandwidth allocatio teleports will have to move away from order-taking and operator-assisted transmissions."

Traffic protocols Implicit in this transition is a change in the type of traffic carrie teleports. In the last few years, analogue transmissions are decreasing and digi becoming mainstay. But even within the digital domain, the supremacy of tradi digital protocols such as ATM and frame relay is being challenged by IP.

Internet Protocol (IP) appears to be the protocol. Comsys, the UK-based telecommunications consultancy, reflects the views of many in firmly believing the future. Adrian Bull, director of operations at Comsys, says that all the satell operators have recognized that indeed this is the way forward. Bull concedes th IP may not be as efficient as ATM, its major strength is as a creature of the Int industry rather than the telcos. There has been an evolution into a global de-fa standard rather than a regional protocol imposed on the rest of the world, whic happened with some other standards in the past.

Bull notes, "It's just engineers at the likes of the Internet Engineering Technica thinking `what's going to be best? They accept, as in the case of the DVB grou they have to work together. There are no hidden political agendas to mess up t process. Anyone who's setting up a network now will use IP unless there is a g reason not to use IP."

In terms of new traffic, Comsys estimates that IP represents in excess of 60 pe business (obviously in Internet applications this growth is 100 percent.) Bull co "There will be an increasing demand for satellite services driven by demand for and applications such as IP multiplexed onto a DVB platform. The cost reductio applications like caching is spurring Internet access providers and ISPs to incre use of IP in the satellite domain, to the extent that IP-related satellite traffic is grow two to three times a year for the next 3-5 years. Our experience is that transponders are literally being gobbled up. In five years time, you will be hard to find any significant non-IP traffic around - apart maybe from telephony, whic slowest to migrate to IP."

Teleport passengers From the perspective of Deutsche Telekom, things look a li different. According to HansJoachim Henss, DT's business unit manager for bro and broadband cable, around 80 percent of domestic German broadcast distribu still carried as analogue traffic. The majority of satellite direct-to-home progra still in the analogue domain, and likely to remain so for several years to come. large number of free-to-air analogue channels, there is little to persuade consu change to digital services, and thus a slow transition to digital distribution. On hand, for broadband contribution, digital transmissions account for more than percent of all traffic, with a steady migration from the small existing base of ar activity. Asked what he defined as broadband, Henss replied "For us it is anyth 6 Mbps, though this definition is likely to change to around 4 Mbps in the next years."

Because Germany is well served within its borders with DSL and fiber infrastru is less significant in the satellite market. Even internationally, IP connectivity fr Germany to the United States is wholly fiber, with satellite merely acting as a However, for DT customers outside Germany, particularly in countries where th less developed telecomm infra-structure, satellite IP traffic is more common.

According to Henss, its teleports are experiencing a steady increase in traffic or antennas; while in the contribution market there is a move to smaller antennas

days of large antenna teleports, in Henss' opinion, are coming to an end.

Nongluck Phinainitisart, president and chief executive officer of Shin Satellite in
Thailand, takes quite a different view. Shin Satellite operates the three Thaicor
satellites that collectively cover 120 countries and 3 billion people, and also ope
first private teleport in Thailand. Phinainitisart says that up until now migration
has been slow and currently around 50 percent of its traffic is still analogue - b
future the move to digital services will be swifter. The cost of digital IRDs has p
barrier to digital services for the consumer market. Even new TV channels laun
analogue, but with the aim of moving to digital once services become affordabl

Shin's Ladlumkaew teleport is just coming onstream for IP traffic with STM-1 (
connectivity - up until now Shin has relied on agreements with teleports in Hor
and the United Arab Emirates to carry its IP services. Ladlumkaew will be expa
carry more IP services via broadband satellite connections, particularly to supp
iPSTAR, its first broadband multimedia satellite to be launched in 2002. Transm
speeds on this new satellite will run up to 50 Gbps - 40 times greater than con
satellites.

So, incidentally, what is Phinainitisart's interpretation of broadband?

"Broadband is providing download burst connections of at least 3-4 Mbps," she
"Broadband delivery will have to be via satellite for most of Asia."

Phinainitisart views satellites vital in providing the link for IP traffic in mainland
where the availability of terrestrial solutions is poor.

Kevin Nishiguchi, international business manager for the video and contents bu
department at Japan Telecom in Tokyo, sees the satellite business growing ver
in the Pacific Ocean region and Indian Ocean region.

"Many companies, including Japan Telecom, are investing heavily in submarine
connectivity," observes Nishiguchi. "There is little development of satellite IP he
good deal of IP activity focussed on fiber."

The tight regulation of spectrum by the Japanese government discourages man
companies - even Japanese ones - to start new services via satellite when the f
infrastructure is a much easier and cheaper route. With the rollout of DSL, and
fiber backbone connectivity, the majority of Japanese have ready access to high
connectivity, and this combined with the diminutive size of the typical Japanese
has discouraged the proliferation of DTH dishes on rooftops.

Nishiguchi sees a steady business in existing satellite services, but few exciting
developments in satellite.

The function of teleports is diverse and likely to change even further over the n
years as we progress even further along the road of the much-hyped Internet r
and broadband rollout. Teleports will become major junctions of connectivity fo
and fiber (or even only fiber-to-fiber). And the development of the teletroplis is
significant leap in the evolution of the teleport.

Print-friendly for

E-mail this article

E-mail brought to you by:

Related Information

News (1 - 3 of 18139)

Mitec Telecom and Nokia Networks Sign an OEM Supply Agreement for Wireless Network Equipment - Supply Contracts Estimated to Exceed CA$13 million
Jan 23, 2010, 07:00 a.m. ET, Canada NewsWire
MONTREAL, Jan. 24 /CNW/ via NewsEdge Corporation -- Mitec Telecom (TSE:MTM), a global leader in the design and manufacture of wireless network products,...

ADVISORY/U.S. Wireless Wait -and-See Attitude May Prove Profitable
Jan 30, 2001, 10:46 a.m. ET, Business Wire
ADVISORY...   --(BUSINESS WIRE)--Jan. 30, 2001--   TOPIC: While wireless companies overseas are investing millions...

OTC Research, Publisher of OTC Growth Stock Watch and Internet/Technology Stock Watch, Offers Free Trial Subscription with a Chance to Win a Dream Vacation
Jan 30, 2001, 10:43 a.m. ET, PR Newswire
NEEDHAM, Mass., Jan. 30 /PRNewswire/ -- OTC Research, the publisher of OTC Growth Stock Watch (OTC GSW) and Internet/Technology Stock Watch (ISW), today...

More ►

Magazine Rack (1 - 3 of 6381)

New sheriff in town
Jan 29, 2001, Telephony, by Carolyn Hirschman
Changes expected at FCC with Powell's appointment as chairman Michael K. Powell will bring a light regulatory touch with a heavy emphasis on enforcement...

Between a pole and a hard place
Jan 29, 2001, Telephony, by Jim Barthold
Supreme Court to hear cable's access fees appeal The cable industry, generally among the most strident of anti-regulation foes, is playing the flip side...

Products
Jan 29, 2001, Telephony, by TELEPHONY STAFF
Pin depth gauge The BNC center pin depth gauge precision dial has been added to the line of CO installation tools. The gauge measures the pin depth of...

More ►

Events (1 - 3 of 78)

NENA
Jun 24, 2001, 12:00 a.m. ET

Cable 2001
Jun 10, 2001, 12:00 a.m. ET

DSL World Forum
Jul 16, 2001, 12:00 a.m. ET

More ►

Discussions (1 - 3 of 56)

Regulatory Issues
Nov 13, 2000, 12:19 p.m. ET from Competitive Challenges By cjohnst

Dan O'Shea
Nov 13, 2000, 11:21 p.m. ET from Mergers By doshea

Re: Regulatory Issues
Nov 14, 2000, 11:00 a.m. ET from Competitive Challenges By Ed_Gubbins

More ►

Supplier Directory (1 - 3 of 562)

Back Office>Air Conditioning
Back Office>Air Conditioning>Building
Back Office>Alternative Energy Sources

More ►

Buy & Sell | Magazine Rack | News & Analysis | Key Web Sites
Training | Events | Discussions

Join Now | My Account | Help | About Us | Contact Us | User Agreement
Privacy Policy | For Advertisers