

## Stratecast Perspectives & Insight for Executives

SPIE 2009 #12 - March 27, 2009

### Tata Communications: The Making of a Global Data Center Leader

---

#### Introduction<sup>1</sup>

Tata Communications, the Mumbai-based communication services provider, is quietly pursuing an aggressive strategy to become a major global services provider. Already in possession of one of the world's largest IP networks, the company is expanding its data center footprint throughout North America, Europe, Asia, and the Middle East. The goal: a robust, integrated infrastructure that will support the company's growing portfolio of managed services and future cloud computing services.

Tata Communications is part of the Indian mega-conglomerate, Tata Group, whose 90+ diverse lines of business span the automotive, steel, power, hospitality, and communications industries; and whose well-known brand names include Tetley Tea and Jaguar and Land Rover automobiles. The Communications unit traces its roots to Videsh Sanchar Nigam Limited (VSNL), the telecom company founded by the Indian government in 1986. In 2000, Tata Group acquired a controlling interest in VSNL and combined the company's resources with its own telecom services group. Still operating under the VSNL brand, the company embarked on a strategy to bolster its global reach, acquiring the global submarine network of Tyco Global Networks in 2005, and Canada's Teleglobe, a leading provider of wholesale network services, the following year.

In early 2008, the company combined its separate VSNL, VSNL International, Teleglobe and other communications units under the name Tata Communications, and began a major marketing push into the North American and global enterprise markets. In the past year, Tata Communications has announced key partnerships and expansions and introduced innovative services.

In this SPIE, Stratecast looks at Tata Communications' recent expansion and how the company is positioning itself to compete with U.S.-based Tier 1 providers in the global data center market.

#### Integrated Infrastructure Designed for the Future

In a future dominated by Cloud Computing<sup>2</sup>, Tata Communications envisions massive amounts of data being stored, processed, and transmitted on demand. To that end, the company has built an integrated infrastructure comprising a global IP network and high-capacity data centers, from which bandwidth-hungry content and applications can be delivered seamlessly. A range of managed and

---

<sup>1</sup> Please note that the insights and opinions expressed in this assessment are those of Stratecast and have been developed through the Stratecast research and analysis process. These expressed insights and opinions do not necessarily reflect the views of the company executives interviewed.

<sup>2</sup> Stratecast has covered Cloud Computing in several studies, including BCS 2-10, *Cloud Computing: What it Is, Where It's Going, and Who Will Lead us There* (November 2008).

value-added services riding on the infrastructure are designed to ensure optimal end-to-end performance.

The backbone of the Tata Communications service portfolio is its global IP network. The network consists of over 140,000 miles of terrestrial and undersea cable, with 300 network Points of Presence connecting more than 200 countries. Bolstered by peering arrangements with over 160 other networks, the backbone offers the peering breadth and bandwidth capacity to deliver high volumes of data to users worldwide.

Integrated with the backbone network are Tata Communications' 20 Internet Data Centers, located on three continents. Tata Communications offers a spectrum of hosting and co-location services for both global and regional clients. In addition, the data center infrastructure enables the company to provide a range of value-added and managed services to its client base.

### **Expanding the Data Center Footprint**

Tata Communications has built its data centers in geographies that reflect the needs of its multinational clients, with particular focus in emerging areas. The leading provider of data centers in India, Tata's global network of integrated data centers extends to Asia (Singapore, Japan), Europe, and South Africa, with future expansion into China and the Middle East.

All Tata Communications data centers are managed centrally from the company's operations center in Chennai. This allows the company to deliver a consistent level of performance and a common set of Service Level Agreements for managed hosting and storage services across all its data centers – a feature that is of great value to multinational companies. The centers are built to identical Tier 3 specifications, an industry standard that comprises multiple distribution paths for power and cooling, redundant components, and an uptime of 99.982%.

To meet anticipated customer demand, Tata Communications is making significant investments to expand its data center capacity. In the past six months, the company has expanded its data center capacity at four major centers: Santa Clara, CA; Mumbai, India; Highbridge, U.K.; and Singapore. Last month, the company announced plans for a new \$180 million flagship data center in Singapore, to be operational in 2010. Called the Tata Communications Exchange, the center will be a key gateway location into the Asia-Pacific region for multinational customers. It will offer the full spectrum of hosting and storage services, from co-location to managed hosting and managed storage to value-added services.

Other recent announcements include plans for:

- A new \$100 million data center in London
- A \$100 million expansion of facilities in India, to support a planned multi-tenant, cloud service
- Two data centers in South Africa to support its South African telecom subsidiary, Neotel
- A joint venture in China for expansion of its network services and data center services.

## Data Center Services

Tata Communications data center services fall along a spectrum from largely unmanaged to highly managed. These services include:

- Co-location – Large clients use Tata Communications data centers to house and manage their own data equipment, with connectivity provided either by the Tata Communications global network or through peering to another network of the client's choice.
- Managed Co-location – Tata Communications data center employees serve as on-site “remote hands” to keep clients' equipment operational.
- Managed Hosting and Storage – Flexible service options include dedicated managed hosting, in which each client's applications and data are kept on physically separate machines from other clients' data; and dedicated virtual service, in which clients benefit from cost-efficiencies of virtualization of their applications. Tata Communications also provides managed delivery services, which include WAN optimization; as well as managed security services.
- Tata Communications also offers professional services, through its sister division, Tata Consultancy. The consultancy's services include system integration, network and data center design, network migration, and implementation.

## Value-Added Services

To augment its data center offerings, in the past six months, the company has launched two services that leverage its IP network and data center capacity to help enterprises and SMB businesses take full advantage of technology to meet their business needs. These value-added services complement the company's portfolio of managed network and data center solutions. Although Tata Communications does not use the word “cloud” in their service descriptions, both services rely on the company's massive infrastructure to deliver highly scalable, high-performance, low-cost service – characteristics of cloud computing. This makes high-level communications attractive and accessible to the mid-markets.

**Content Delivery Network (CDN) Service** - In the belief that Internet video traffic will explode with high-def video and large multimedia files, Tata Communications has introduced a “next-gen” CDN service that is architected to deliver high quality media, on-demand or live, with some of the lowest levels of delay and highest levels of throughput in the industry. The service utilizes the Tata Communications global IP transit network and a proprietary architecture developed for Tata Communications by CDN provider BitGravity, which consists of "origin-based" servers linked together by multiple 10 Gigabit pipes. In addition to high throughput, this architecture offers data protection through the automatic replication process implemented across the network's servers. Additionally, Tata uses proprietary BitCast technology, developed by BitGravity, to eliminate the second DNS query, which is prone to delays, and Distributed Denial of Service (DDOS) attacks.

According to Tata Communications, the low-latency and high-speed delivery make the service ideal for delivery of high-def video and large gaming files. Priced using a pay-per-use rather than subscription basis, the service is highly scalable and cost-effective.

**Telepresence Services:** Launched in July 2008, the Tata Communications managed Telepresence service for enterprises includes network management, service deployment and maintenance, and a “concierge” service that handles reservations and scheduling. Tata also opened the world’s first public Telepresence rooms in India, U.K., and U.S. With pay-per-use pricing and hourly rates, the public rooms make high-definition video meetings accessible to smaller and remote businesses. Tata Communications has launched eight public Cisco TelePresence rooms and will be significantly increasing the number of these facilities around the world in 2009. To achieve its goal of enabling the most extensive meetings coverage globally, Tata Communications will be opening the world's first open Telepresence Exchange in mid-2009 connecting any public or private Telepresence rooms, regardless of network.

## **Global Data Center Leadership**

Tata Communications has set high standards in establishing itself as a global data center leader.

### ***Leadership in Emerging Markets***

Tata Communications’ expansion into global networking was fueled by the trend toward offshoring of critical data functions by multinational companies. To respond to the rapid influx of IT activity in Chennai, Mumbai, and other Indian cities by the world’s leading financial institutions, Tata built its network and data center infrastructure to meet highest levels of availability and performance. Today Tata boasts 25,000 miles of fiber optic network in India, including fiber metro backbone to the nation’s top 12 cities, as well as 10 Internet Data Centers.

As part of its expansion strategy, Tata Communications continues to invest in network and data center infrastructure in the emerging markets of Asia and the Middle East.

### ***Compliance with International Quality Standards***

Complying with recognized best-practices is not just a good idea; it’s good business. Enterprises increasingly are demonstrating accountability to their customers and shareholders by demanding that their partners and suppliers comply with industry-established standards for the production or delivery of services. To that end, Tata Communications holds and continues to pursue ongoing certifications from industry standards bodies. Figure 1 lists the company’s current certifications related to its data centers.

**Figure 1**

**Ongoing Standards Based Certifications**

Summary	
ITIL	<ul style="list-style-type: none"> <li>▪ Service Delivery</li> </ul>
ISO/IEC Certifications (for MSOCs and IDCs)	<ul style="list-style-type: none"> <li>▪ ISO 14001 Renewal</li> <li>▪ ISO 20000</li> <li>▪ ISO 27001</li> </ul>
SAS 70 (for MSOCs and IDCs)	<ul style="list-style-type: none"> <li>▪ Type 1</li> <li>▪ Type 2</li> </ul>
TIA 942 (for IDCs)	<ul style="list-style-type: none"> <li>▪ Standardizing IDCs to highest TIA tiers</li> </ul>
PCI DSS	<ul style="list-style-type: none"> <li>▪ Ensuring IDC compliance to PCI standards</li> </ul>

*Source: Tata Communications*

**Green Leadership**

The huge amount of energy consumed by data centers has become an issue of international concern. Because of the profound impact, a leader in the data center industry must take responsibility for addressing environmental issues.<sup>3</sup> Tata Communications implements best practices for energy savings in its data centers. The company is a member of the Green Grid, a broad-based organization devoted to establishing and disseminating best environmental practices in data center design and management. In addition, the company serves on the advisory board for the U.K.’s Code of Conduct, an environmentally-based series of regulations regarding data center architecture.

<sup>3</sup> Stratecast has covered environmental issues associated with data centers in several studies, including BCS 1-2, *The Green Data Center* (October 2007), and SPIE 2009-03, *Five Things to Love About the Cloud* (January 2009).

## Stratecast The Last Word

Tata Communications is quickly emerging as a global network and data center player. Its expansive, high-capacity global IP network, coupled with its growing roster of high-capacity data centers, provides the integrated infrastructure enterprises need to manage, store, and transmit high-bandwidth content to a worldwide market.

The company deserves credit for pursuing an aggressive expansion strategy, investing heavily in both infrastructure buildout and new product launches. Its integrated managed and value-added services, such as the Content Delivery Network and Telepresence Service, fit well with its overall global strategy and complement its portfolio of global managed network and hosting services. Further, these services utilize Tata Communications' expansive infrastructure to deliver scalable, utility-priced communications services downmarket, in a cloud-like model.

Amid the turmoil of expansions and product launches, Tata Communications posted impressive financial results for 2008, with net profits up 200% in the quarter ending December 31 compared with that quarter the previous year. The company attributed the growth to both wholesale voice services and enterprise data services.

The company may not be able to sustain the frenetic pace of the past year. In fact, it may be advisable for Tata to focus on building brand recognition among North American multinationals and gaining additional customers in the new services it has launched. However, in the face of the current economic downturn, the company has shown no indication of backing off its expansion strategy – and may have the opportunity to pick up market share, especially in emerging markets.

Tata Communications offers a compelling, end-to-end package for global delivery of applications, whether hosted or cloud-based. It is well-positioned to become a strong competitor to AT&T, Verizon Business, IBM, and other global data center providers.

### ***Lynda Stadtmueller***

Senior Research Analyst – Business Communication Services

Stratecast (a Division of Frost & Sullivan)

[lstadtmueller@stratecast.com](mailto:lstadtmueller@stratecast.com)

**About Stratecast**

Stratecast assists clients in achieving their strategic and growth objectives by providing critical, objective and accurate strategic insight on the global communications industry. As a division of Frost & Sullivan, Stratecast's strategic consulting and analysis services complement Frost & Sullivan's Market Engineering and Growth Partnership services. Stratecast's product line includes subscription-based recurring analysis programs focused on Business Communication Services (BCS), Consumer Communication Services (CCS), Communications Infrastructure and Convergence (CIC), OSS and BSS Global Competitive Strategies (OSSCS), and our weekly opinion editorial, Stratecast Perspectives and Insight for Executives (SPIE). Stratecast also produces research modules focused on a single research theme or technology area such as IMS and Service Delivery Platforms (IMS&SDP), Managed and Professional Services (M&PS), Mobility and Wireless (M&W), Multi-Channel Video Programming Distribution (MVPD), and Secure Networking (SN). Custom consulting engagements are available. Contact your Stratecast Account Executive for advice on the best collection of services for your growth needs.

**About Frost & Sullivan**

Frost & Sullivan, the Growth Partnership Company, partners with clients to accelerate their growth. The company's TEAM Research, Growth Consulting, and Growth Team Membership™ empower clients to create a growth-focused culture that generates, evaluates, and implements effective growth strategies. Frost & Sullivan employs over 45 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from more than 30 offices on six continents. For more information about Frost & Sullivan's Growth Partnership Services, visit <http://www.frost.com>.

**CONTACT US**

For more information, visit [www.stratecast.com](http://www.stratecast.com), dial 877-463-7678, or email [inquiries@stratecast.com](mailto:inquiries@stratecast.com).