

Convergence and Consolidation from Telecomm to TMT

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ABSTRACT: *The study aims to understand and analyze the drivers of the current dynamism in the TMT sector. TMT stands for a convergent sector trend of technology, media and telecommunications. The future for telecom can be visioned in future industry convergence trend. It is understood that Technology convergence in the telecom and the IT sectors has led to service and company convergence. This can be witnessed in advanced countries where the traditional telecom operators have started offering audio-visual programming and Internet access. Cable TV operators are rolling out a variety of telecom services like voice telephony. There is use of Cable modems for the high-speed Internet access. Broadcasters are switching over to programme bouquets, pay per view and experimenting with digital transmission. The study forecasts a huge momentum in the merger & acquisition activity in telecomm sector for the next couple of years.*

The study also seeks an understanding of the recent consolidation in this sector and assess the strength of major players post consolidation in telecomm. As already evident by end of 2007 the Six major players of the telecom space have now reduced to three by alliances namely Ericsson acquired Marconi in 2005, Alcatel merged with Lucent in 2006, Nokia merged with Siemens in 2007.

The future in telecomm will see the possibility of demand exceeding supply on the Internet; the enhanced need for broadband appliances, mobile video, the commercialization of social networks and user-generated content, new combinations of existing technologies, the technology industry's benefit from social networking, the emergence of parasitic power systems and the technologically enhanced human.

INTRODUCTION

Telecommunications firms have experienced difficult market conditions since 2000. However, spending in the telecommunications industry is poised to take off after a three-year slump, with total spending in products and services expected to grow at a compound annual growth rate (CAGR) of almost 10% for the next three years. According to the Telecommunications Industry Association's (TIA's) 2004, Telecommunications Market Review and Forecast, the U.S. telecom industry spending was expected to grow at a 9.2% compound annual rate after 2004, from \$0.8 billion in 2004 to over \$1 trillion in 2007. TIA credited the rosy outlook for the telecom industry on an improving economy and an FCC decision—not to force regional bells to share DSL loops with competitors—that should encourage telecom spending. Broadband adoption will drive some of the industry growth. Demand will also increase

dramatically for telecom support services, including design, integration and maintenance of enterprise telecom systems. Also expected to grow is spending on wireless communications, including services, phones and capital spending. Wireless service revenues, not including wireless equipment and capital spending, just passed U.S. spending on long-distance toll calling revenues and should overtake local telephone access revenues in 2007. Competition among services is leading to more options for customers, including flat rate and packaged pricing plans for telephone service. This in turn is presenting an opportunity for leading telecom companies to generate more revenue.

The Telecom industry is currently undergoing great transformation due to factors like regulatory changes, launch of new technologies & business models, and mergers & acquisitions. While new technologies and services are stimulating further growth, intense competition, churn and falling ARPU are exerting

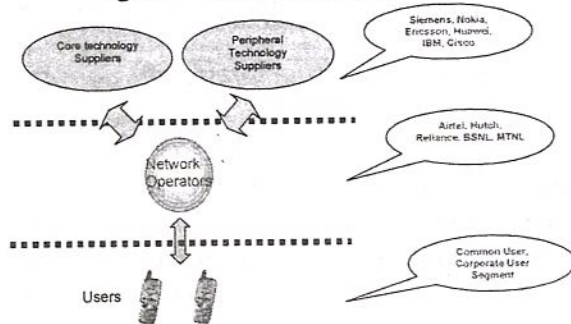
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significant financial, technological and competitive pressures on Service Providers (SPs). The cascading effect of these changes is being felt by the network equipment vendors (NEVs) and independent software vendors (ISVs).

The key challenge is faced by the NEVs and ISVs is that of supporting the SPs in introducing new, innovative, feature-rich services to market ahead of competition, while keeping the cost of their services in check. It is because of the recent wave of globalization, that telecom's technological and business expertise can today be outsourced from around the globe. Whether the need is expertise in VoIP, UMTS, or service quality management, such expertise is available to the NEVs, ISVs, and SPs. Those who leverage this expertise stand to gain a significant competitive advantage in time to market, cost-effectiveness, and feature-set of their products and solutions.

Figure: Current industry sector



Core Technology Suppliers:-

These are the TEM (Telecom Equipment manufacturers) who manufacture the core products like switches, radio access equipment and comply to the standards set by ETSI, IEEE and other Telecom Standards Institutes world-wide. The major TEM's include - Nokia-Siemens, Ericsson, Motorola, Alcatel - Lucent, Huawei, Nortel and ZTE . The instrument (customer equipment) manufacturers like Nokia, Sony-Ericsson, LG, Samsung etc may also form a part of the same.

Looking at the Wireless core infrastructure market share (HW sales) of the major players-

Peripheral Technology Suppliers - are the ones, who provide the peripheral technology infrastructure like the IT infrastructure - customer care system, billing system, value added services platforms, civil infrastructure etc

Network Operators

These are the service providers who directly interface with the consumers (telecom service users). These may include the DSL Providers, mobile operators, fixed line operators etc. The top three global operators are Vodafone, Hutchison & T-mobile.

Users

Users may be classified as individual users & corporate segment. Further among the individual users we can classify them as Youth or Non-Youth masses.

EMERGENCE OF TMT

TMT stands for technology, media and telecommunications. In the TMT sector, the Internet provides technological support for media, while telecom offers channels for selling products, and media and information are the backbone. In the future, information will weigh heavily in technology-oriented industries.

TREND in TMT Merger activity

2006 was a good year for the technology, media and telecommunications (TMT) sector in world. Maximum activity could be seen in Europe where 745 deals were completed during the course of the year, 22% more than 2005. On average, 62 deals were completed every month, with May and June being the most active months, each registering more than 90 deals. The last six months show signs of a slight slowdown, accounting for only 40% of the total number of deals, although a jump in activity is expected in the first quarter of 2007.

In terms of the value, TMT transactions across Europe reached a total of approximately €180bn in 2006. The year had its share of mega-deals, including Merger of Nokia Networks and Siemens Carrier operation valued at €25 billion; The acquisition of Portugal Telecom by Sonacom for €14.4 billion; The €12 billion buyout of Wind; VNU's €8.6 billion buy-out from a consortium of investors; and The €7.5 billion merger between French pay TV rivals, Canal+ and TPS.

In India 133 M&A Deals Struck during January-March 2006 across sectors. Out of the 35 deals abroad, Indian firms bought 32 foreign firms outright. Among the 30 inbound deals, overseas firms took majority stake only in 7 deals. IT & ITES

sector contributed one-fifth of the deals, Telecom had a billion-dollar deal.

IT and ITeS sectors accounted for 20% M&As—the highest share in terms of total M&As struck during the three months. Of the total 131 total deals, 27 were related to these sectors, of which nine were outbound. Major deals include KPIT Cummins acquiring Bangalore-based CG Smith software, telecom software-maker Subex Systems Ltd. buying out the fraud management business assets of the Virginia-based Mantas Inc for \$2 million and Tata Interactive system taking over two European firms of Tertia Edusoft Group. Wipro Technologies continues its acquisition spree and takes over Mango Inc for \$20 million, while MASCON Global Ltd. acquired US-based Anthem Technologies Inc for \$19 million. Kanbay International acquired Adjoined Consulting for \$165 million.

In this sector, however, there were a large number of inbound deals. Corpus Inc, US-based IT services provider, bought the Bangalore-based Itellix Software Solutions Pvt. Ltd. for \$2.5 million stock plus cash deal and Israel-based Ness Technologies took over Innova Solutions, Hyderabad-based IT services and solutions company, for \$25 million.

DRIVING FORCES FOR MERGERS & ACQUISITIONS TREND IN TMT SECTOR

Mobility and moderate growth in the industry

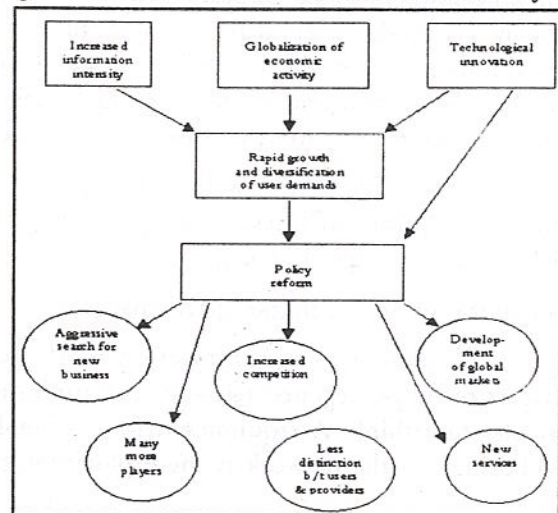
The most striking feature of the telecom future appears to be mobility. Demand for mobile communications independent of place and time is rising. By 2010, aspects of pervasive computing will reflect many of the customers' wishes. "Wireless," in combination with the Internet, is and will remain the trend over the coming years. Yet new business will presumably not be a question of a single killer application. On the contrary, predictions foresee a rapid increase in individual, new services and applications as a key criterion for a growing telecom industry. The broadband market is already clearly one of the fields of growth in the private customer segment. In the medium and long term, mobile broadband access and the corresponding services and applications will stimulate market dynamics. In the business customer segment, managed services are rich in short and medium term opportunities. In the long run, the concept of utility computing will assert itself, combining the comfort of flexible access to

ICT services with cost-efficient use. However, no matter what efforts the telecom companies make to stimulate growth, customer requirements will remain at the forefront.

Regulation with new tasks

Technological convergence will have a major effect on regulation. The assumption is that the distinction between content and transmission will become increasingly blurred because of the convergence of media and telecommunications. The fading of technological differentiation between various access technologies will lead to a distinction between network access and service regulation. Furthermore, the price systems will be adapted to reflect the interconnection contracts. A "must," as the price differentiation between termination in the mobile and fixed networks, for example, will become marginal for hybrid access technologies. Universal service obligations will be extended to include additional services such as mobile telephony or broadband access. Mobile network. Operators will draw the increased attention of the regulatory authorities. One of the reasons for this is that mobile call-by-call will be established in 2010, and operators with significant market power will be forced to tolerate access to their infrastructure. Ultimately, there is good reason to believe that the influence of regulation on the telecom market will continue even after 2010. This is because new needs will arise from the liberalization of further markets, some governments will still lack in interest in the reduction of the incumbents' market dominance, and the government authorities will have a natural self-preservation instinct.

Figure 2 - Forces that Drive Telecommunications Reform



Source: Saunders et. al, Telecommunications & Economic Development

Massive transformation in the Telecom value structure, disintegration of the value chain at a vertical level (e.g. separation of transport and service layers) and integration at a horizontal level (e.g. fixed mobile convergence) are the driving forces for long-term structural transformation in the telecom industry. Liberalization and privatization will play a subordinate role as the markets continue to mature. This development will be characterized by platform convergence and use divergence, exemplified by the end of the network dichotomy of fixed network and mobile network in the connection network. The use of diverse services independent of terminal equipment will advance in parallel to this. IP will transform the basic service 'voice' into an application at a higher value level. Key factors in the voice business of the future will be equipment and applications. At the network level, technical services will become increasingly cheaper and interchangeable. This will change the contribution made by the network business as a core element of the value structure. At the same time, intangible corporate values such as brand name, image, clientele, etc. will move into the forefront. Moreover, commoditization will influence the relationship between IT and TC. Since connectivity will be purchased more as an integrated element of corporate solutions rather than as an individual component, the relationship of the telecom companies with solution providers (system integrators) will gain in importance and strengthen the character of connectivity as a preliminary service. A major consequence of the structural transformation will be the redefinition of TC products. In an age of pervasive computing, it will no longer be possible to market them as purely TC products. Similarly, the apportionment of the consumer budget will become blurred. In a long-term scenario, IP will lead to the merging of classic industries. Here the key word is market convergence.

Market segments will develop along horizontal application lines, leading to a market which is more strongly fragmented.

Re-organization of the market participants

The structural transformation will force managers of fully-integrated telecom companies in particular to rethink. A requirement for profitable mass business in the network is the exploitation of

scale effects. This logically leads to a strategy of cost leadership. In contrast, service and sales layers will gain competitive advantage by means of differentiation in their product portfolios. Potential for conflict will arise for carriers who attempt to reconcile the contradictory requirements within vertically integrated structures. Boundaries between the product portfolios, which were previously centered on the network, will simultaneously break down. Telecom companies will have to reconsider their organizational forms and market position and align themselves along horizontal organizational lines with a clear customer orientation.

- NetCo: production of network services and their sale on to ServCos (=wholesale business)
- ServCo: product configuration and resale of TC products to SalesCo (finely segmented mass market) and to end customers (other mass market)
- SalesCo: sale of TC products, products from other industries, and product bundles to finely segmented consumers on lifestyle markets and in other industries

Upgrade in networks leading to increased capex:

Over the last few years, voice has increasingly become a commodity and there has been a sharp decline in long distance calls with the advent of e-mails and voice over internet protocol (VoIP). The only way out for the incumbent is to invest in next generation services that can help it to provide differentiated services and bring in customer stickiness. Major telecom giants are investing in the next generation converged networks that would offer voice, data and video over a single network. The mobile TSPs on the other hand are also upgrading their existing networks to support next generation 3G services which would help them clear the congestion problem currently faced and also offer high-speed internet, entertainment, and information and e-commerce services to customers on the move.

Off-shoring as the preferred route:

TSPs are on a sticky wicket where on one hand, they need to drive up the stagnating ARPU (average revenue per user) and on the other, reduce costs to maintain profitability. The focus on NGN services also calls for TSPs to rationalize their legacy



systems so that they can reduce the maintenance costs and open up the capex for investments in other profitable ventures. All these call for a strong case for off-shoring and TSPs are increasingly adopting it as the preferred route.

Huge latent market opportunity:

According to Ovum research the IT spend by TSPs was estimated to be around US\$30.6 bn in CY05 and is further expected to grow at a CAGR of 5.8% over CY05-09E.

Attractive opportunity in the TEM space too:

The global TEM market has also gone through turbulence in the last few years. Telecom equipment manufacturers are facing severe competition from Chinese markets and hardware technology is getting increasingly commoditized. The embedded software is becoming more and more the only differentiating element. TEMs also play a crucial role in deployment of NGN as they provide network equipment such as switches and advanced handsets, which can support these services. Given the above scenario, the TEMs have also sought offshoring as the means to reduce costs, maintain margins and reduce time-to-market. According to Data monitor research, the TEM revenues worldwide are expected to grow at a CAGR of 3.0% from US \$299 bn in CY05 to US\$348 bn in CY09E. The TEMs spend about 10-15% of revenues on R&D (see Exhibit 5) and a reasonable proportion of that is attributable to software and IT services, thus constituting the addressable market for vendors like TechM.

CONCENTRATION IN TELECOMM INDUSTRY:

The concentration in telecomm sector has been measured with the help of index HHI. The HHI is the sum of the squares of the market shares. For example, if a market is shared by three firms with 30% each, and five firms of 2% each, the HHI is $3 \times 900 + 5 \times 4 = 2720$.

HHI < 1,000: Unconcentrated Market

1,000 < HHI: Moderately Concentrated Market

1,800 < HHI: Highly Concentrated Market

If, as a result of a horizontal merger, the HHI increases by less than 100 points in a moderately

concentrated market or by less than 50 points in a concentrated market, that merger is considered to be "safe." If the merger increases the HHI by more than these thresholds, it is examined further to determine its likely effect on competition.

Studies reveal unregulated telecommunications industries declined in concentration in the 1980s, after the AT&T divestiture, which opened equipment and long-distance markets. The trend is flat after 1988, and industry concentration is high. After 2001, with the large equipment makers in decline, market concentration dropped still further.

But most interesting is the concentration trend of the regulated telecommunications industries, starting at highly concentrated levels in the early 1980s, overall concentration declined especially after the 1983-84 AT&T divestiture, but also thereafter until 1996—the year of the deregulatory 1996 Act. Around that time, the concentration level was at its lowest, though barely touching the bottom range of high concentration. But following that period, concentration rose again.

Thus, we find that regulated communications industries are substantially more concentrated than unregulated ones, and they are increasing in concentration after 1996 following a period of de-concentration in the 1980s and early 1990s. In general, regulated industries are often concentrated. This may be the reason, after all, that they are regulated—to protect the public from the negative results of market power. But the causality flows both ways. Regulation has traditionally also protected firms from competitive entry, especially in telecommunications and television industries. The process of regulation, often captured, has been used to stabilize industries.

	Subscribers	Share(%)	Share (Sqr)
Aircell Cellular Ltd	5244656	2.66%	7.07
Airtel	46814745	23.73%	563.14
BPL Mobile	1101882	0.56%	0.31
BSNL	29704426	15.06%	226.72
Dishnet Wireless	2375852	1.20%	1.45



Vodafone	34115195	17.29%	299.05
Idea	17870956	9.06%	82.06
MTNL	2729090	1.38%	1.91
Reliable Internet	333189	0.17%	0.03
Reliance	34434052	17.45%	304.67
Spice	3397629	1.72%	2.97
TATA	18902320	9.58%	91.81
HFCL	152727	0.08%	0.01
Shyam (CDMA)	99677	0.05%	0.00
	197276396	100.00%	1581.20

Between 1996 and 2006, more than 20 M&A deals worth over \$20 billion took place in the telecom sector, 14 of which in the US. Telecom mergers amount for 7 of the largest operations announced in 2000, and 8 out of the 10 largest of all times. Two controversial massive deals in particular symbolize the "merger fever" that seized the telecom industry at the end of the 1990s. The \$180 bn hostile bid successfully launched by Vodafone in November 1999 on the Mannesmann conglomerate to build the largest mobile provider across Europe. And, less than two months later, the very publicized \$160 bn merger between the world leading Internet provider AOL and the media giant Time Warner. These takeovers actually display, though in a rather extreme and spectacular way, some crucial features found in most telecom mergers: the excessive financial amount involved, financed by stock exchange, for generally a closed American or European-based combination while transatlantic deals still remain exceptional. Besides, the motivation put forward by the management of these companies during the official public announcement offers a comprehensive summary of the main economic arguments used during the merger wave: rapid technological innovation and media convergence, deregulation/ privatization of national monopolies, financial market incentives.

The projected worldwide expenditure on software and IT services by telecom service providers

is slated to be a US \$38.4 bn opportunity by CY09E (CAGR of 5.8% over CY05-09E). Issues such as declining average revenue per user, migration to next generation networks and faster time-to-market make telecom amongst the fastest growing verticals for IT services. The global telecom space has undergone a sea change in the last decade in terms of regulatory environment and competitive landscape. Deregulation and other radical measures by various authorities have been intended at creating a dynamic marketplace. In addition to this, the deployment of next generation networks (NGN) has created increased demand for software and IT services with solutions required at multiple network points contrary to the earlier PSTN systems.

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