Sri Lanka Telecom Brief

By Ken Zita and Akash Kapur

Sri Lanka's telecommunications industry is fuelled by progressive market reforms, economic liberalization and pent up consumer demand. The local telecom sector is open to foreign investment, regulated with a light hand, and managed by a workforce whose literacy rate tops 90%. In recent years, the country has also benefited from a "peace dividend" in the form of a two-year ceasefire between the government and Tamil separatists in the North.

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What hangs over this potentially positive environment is a political stalemate, fuelled by a feud between the country's prime minister and its president. In early 2004, Parliament was dissolved and the country faced its third election in less than four years. Optimists hope the election, scheduled for April 2004, will break the stalemate; others fear the political dispute will worsen, slowing down the economy and, perhaps, jeopardizing the peace process.

Prospects for telecom could be affected. The market has ample room to grow, provided the ceasefire prevails and the new government maintains the current commitment to reconstruct regions damaged in the conflict. Continued political uncertainty, however, would almost certainly dampen the investment climate and limit the policy and regulatory commitment necessary to implement many of Sri Lanka's more ambitious reforms.

Key Indicators

Democratic Socialist Republic of Sri Lanka	
Population	19,742,439 (2003 est.)
GDP	$18.4 billion (2003 est.)
GDP real growth*	3.2%
GDP per capita	$874 (*World Bank*)
PPP	$73.7 billion
PPP per capita	$3,700
Literacy	92.3%
Phone lines	833,100 (2004)
Telephone density	4.7 (2004)
Mobile phones	931,600 (2004)
Mobile density	4.9 (2004)

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Political and Economic Brief

Sri Lanka – or Ceylon, as it was once known – gained independence from Great Britain in 1948. In the years immediately following independence, its prospects were bright and the island nation benefited from a strong economy, rapid development, and relative harmony between its politicians and various ethnic groups. By the mid-1950s, however, a program of nationalization and socialization slowed the economy, restricted entrepreneurship and scared off foreign investors. US oil companies fled, for instance, when the oil industry was nationalized. Additionally, tensions were rising between the Hindu Tamil minority and the Buddhist Sinhalese majority, fuelled by Tamil resentment over perceived discrimination in education and job prospects. These tensions evolved into a state of civil unease that led to periodic ethnic clashes lasting into the 1970s.

In 1977, Prime Minister Junius Richard Jayewardene reversed course on economic policy with a major stimulus package: he cut state subsidies, devalued the rupee, and laid out the red carpet for foreign investors.By then, however, the simmering ethnic conflict had reached a boiling point. In 1983, a group of Tamil rebels -- the self-styled Liberation Tigers of Tamil Eelam, or LTTE -- ambushed and massacred an army patrol in the North; this in turn set off violent riots in which Tamils throughout the country were targeted by Sinhalese mobs. Up to 2000 people were killed, and the country was plunged into a cauldron of violence that has defined its political and economic life ever since.

The 1980s and 1990s were a time of great bloodshed, scarred by bomb blasts and audacious political assassinations. An all-out war raged in the northern areas between the Sri Lankan army and the Tamil Tigers, who were determined to secure their own state. For a time, the Indian army stepped in to try to keep the peace, but it faced a tenacious foe in the Tigers, and left (under government pressure) in 1990. In 1999, a suicide bomber blew herself up just five meters from the country's current President, Chandrika Bandaranaike Kumaratunga in Colombo, killing more than 20 people and blinding the president in one eye. Some observers attribute the president's current suspicion of the Prime Minister's peace initiative to a deep-seated personal animosity of the LTTE, stemming from that incident. Others, however, say she believes that she was spared in order to play a direct role in bringing peace to her country.

The economy, predictably, has suffered from years of persistent conflict. Sri Lanka has, arguably, the most open economy in South Asia: it has low customs duties, investor friendly laws, and recently removed foreign ownership caps on a number of industries (including telecommunications). Though it was once touted as a future Asian Tiger, its real growth has failed to justify the label. The economy expanded by an average of 5.2% during the 1990s, reaching 6.0 in 2000, but contracted by 1.4% in 2001, the first negative growth rate since independence. Poverty remains high, affecting an estimated 25% of the population.

Elections in 2002 brought in a new government and, with it, a renewed sense of hope. Ranil Wickremasinghe's United National Party, which led the country from 1977-1994, introduced a new round of economic reforms and, most notably, made substantial progress on a Norwegian-brokered peace process with the Tamil Tigers. The Tigers, somewhat weakened by the international war on terrorism, appeared willing to abandon their demands for an independent state and settle instead for some form of self-rule. Under Wickremasinghe, the country began enjoying a genuine “peace dividend”: defense spending was cut and the national security levy was eliminated, foreign direct investment increased, tourists started arriving in greater numbers (over 500,000 in 2003), and the economy turned around, growing at 4% in 2002 and projected to hit 5.5% in 2003. In June 2003, at a donor conference in Tokyo, $4.5 billion was pledged for the “Regaining Sri Lanka” program aimed at rebuilding the nation. After a two-decade civil war that had cost some 64,000 lives and displaced another 800,000, it appeared the tide was turning.

An increasingly bitter feud between the prime minister and the president, who share power under the constitution (but hail from different parties and have a long history of personal animosity), has stalled negotiations with the Tigers. The political crisis came to a head in November 2003 when the president, claiming she saw weakness in the prime minister’s negotiating position with the LTTE, dismissed three key ministers (Defense, Mass Communication and Interior) and imposed a state of emergency (though she later denied the state of emergency existed). Talks between representatives of the prime minister and the President were held, and for a time it appeared that the tensions were easing. But in February 2004, the president dismissed Parliament and called for new elections, the country’s third round in less than four years. In doing so, she expressed the hope that the elections, scheduled for April 2nd, would ease the political stalemate, and allow the government to negotiate with the Tigers with a stronger voice;.

Most observers, however, fear that the elections will resolve little, and that the ongoing uncertainty will only harm the nation. Business, in particular, has been broadly supportive of the prime minister, and remains wary of the unwieldy alliance cobbled together between the president’s PA and the leftist People's Liberation Front (JVP), which has a violent past and has expressed hostility to globalization and multinational companies. There is some fear that this alliance, if it comes to power, could slow economic liberalization, and that the JVP’s Sinhala ideology might undermine negotiations with the Tigers. Though all sides have pledged to honor the ceasefire, and there is overwhelming public support among all ethnic groups for the peace process, there is at least a perceived risk that violence could return.

While the LTTE maintains that it will continue to respect the ceasefire, it has also expressed apprehension about working with the JVP (which a Tiger newspaper recently denounced as the Taliban of Sri Lanka); the JVP itself recently labeled the truce with the Tigers a “security threat” to the nation, and said it would reconsider the current ceasefire arrangements. Nonetheless, given the popularity of the peace process and the lack of desire for either side to return to fighting, much of this rhetoric is most likely the result of overly aggressive campaign tactics. Given Sri Lanka’s proportional representation system, however and the strength of pro-LTTE Tamil parties in the north and east, a major shift in parliamentary seats is unlikely. This may potentially pave the way for the prime minister to return to power through a loose coalition of his UNF party and the Tamil and Muslim parties, in which case the political stalemate is likely to continue. Once convened, the new Parliament cannot be dissolved by the President for a full year.

Demographics and Economy

Sri Lanka has a population of just over 19 million inhabitants, occupying an island state of 66,000 sq. km – slightly larger than West Virginia. There are three major ethnic groups: the Buddhist Sinhalese (74% of the population), Hindu Tamils (18%), and a Muslim minority of approximately

8%. Sri Lanka's GDP per capita stood at $874 in 2002, relatively high by South Asian standards ($460), but below the world average for lower-middle income countries ($1390). Sri Lanka's welfarist policies have, however, resulted in a high rate of human development, comparable in many respects to more economically developed nations. The adult literacy rate is over 92% (though English language penetration is limited to the more elite educated and not widespread throughout the workforce). At 72, life expectancy is the highest in the region. Infant mortality, fertility and other human development indicators are also higher than most developing countries.

While Sri Lanka's economic performance has failed to meet the expectations of some, its overall growth can be considered impressive given the many challenges the nation faces. The economy's resilience is attributed in part to the war's relative regional isolation (to the North-East), as well as to the government's market- and investor-friendly policies. Under the 1978 Board of Investment (BOI) Act, for example, the government offers several concessions and tax holidays to foreign investors; in addition, a number of sectors, including telecommunications, have had foreign ownership caps removed in recent years.

Despite such investor-friendly policies, FDI in Sri Lanka has generally been lower than in many of its neighbors. Between 1981 and 1990, total FDI in Sri Lanka amounted to only $81.5 million. FDI picked up in the 1990s, largely in response to the government's privatization program. Between 1990 and 2000, $609 million of the total FDI ($1,791 million) was accounted for by 11 large privatizations. A substantial portion of these investments took place in the telecommunications sector, which accounts for three of the five largest cumulative investments in Sri Lanka; out of a total FDI of $242 million in 2002, the telecommunications sector represented $87 million. Another notable trend is that most FDI (60%) has taken the form of 100% foreign-owned vehicles rather than equity joint ventures.

Sources of FDI 1979-2000

Country	% Total
Singapore	16.5%
United Kingdom	13.9%
Japan	12.1%
Republic of Korea	11.5%
Hong Kong	10.0%
Australia	7.5%
United States	**6.6%**

Source: UNCTAD and Board of Investment (BOI). US Figures are 1978-2004.

The three largest sectors of the economy are: Services (53.6% of GDP in 2002), Agriculture (20.1%) and Industry (26.3%). Services, under which the telecommunications industry is included, have grown at the most dynamic rates in recent years; the communications sector is estimated to have grown by about 19% in 2002. Out of a total GDP of $16.6 billion, revenue from services in 2002 was estimated at $335 million. Although FDI was in the past concentrated in industry (manufacturing in particular), by 2000 services accounted for 55.6% of total FDI.

Sri Lanka's generally poor performance in attracting FDI can largely be attributed to its civil war. If the ceasefire holds, the country should be able to catch up with its neighbors. Investor perceptions of risk are likely to increase, however, given the current political uncertainty. In 2003, the US Embassy in Colombo predicted a 2004 growth rate of 6.5%, and the Economist

Intelligence Unit was predicting a rate of 6%. Those figures may now have to be scaled down. Exclusive Analysis, a London-based political risk consultancy, currently rates the one-year War, Unrest and Political Risks as Elevated, and the one-year Terrorism Risk as High (on a scale of Low-Caution-Elevated-High-Severe). The international community in Sri Lanka, however, continues to work with the Government to foster progress in the peace process, despite the lack of movement in the peace negotiations. With little desire in any camp for a return to war, violence and anti-peace process rhetoric remain largely confined to the fringes of the political spectrum.

While the US accounts for a relatively small portion of total FDI, the US has a somewhat larger role in trade. It is the biggest market for Sri Lankan goods, mostly garments, valued at $1.8 billion in 2002 or 38% of total exports. Total US exports to Sri Lanka in 2002 were $166 million. Telecommunications equipment represents a negligible portion of these figures.

Sri Lanka Telecom Policy Environment

Sri Lanka has made significant strides in telecommunications liberalization since the inception of sector reforms in 1991, resulting in a competitive market environment. Policy leaders identified and understood early the potential economic and social benefits of ICT and have crafted a progressive framework for industry modernization and reform. Generally, the results of liberalization have been impressive, with the telecommunications sector growing at one of the fastest paces in Asia. Politics, however, have caused regulatory uncertainty and other difficulties for operators. Recently Sri Lanka has taken the dramatic step of opening its international services sector to competition in a concerted policy program that is being watched by low- and middle-income countries worldwide. If Sri Lanka can achieve a measure of political stability and maintain the peace with the LTTE, these programs could help spur impressive growth in the telecommunications sector.

Liberalization Roadmap

The enactment of the Sri Lanka Telecommunications Act in 1991 separated the policy and business wings of the Ministry of Post and Telecommunications, and carved out Sri Lanka Telecom (SLT) as a separate entity. Under the provisions of the law, SLT was granted a license to operate domestic and international voice traffic. The country also saw the creation of its first regulatory authority that year – the Office Director General of Telecommunications; in 1997 it became the Telecommunications Regulatory Commission (TRC).

In 1996, SunTel and Lanka Bell were issued local loop licenses utilizing WLL technology and thus ushered in the era of competition. By the mid-1990s, Sri Lanka also had four cellular operators: CellTel, Mobitel (an SLT subsidiary), Lanka Cellular, and MTN**.** Each of these operates on a GSM network, except Mobitel, which operates on a dual DAMPS/GSM network (and is in the process of migrating entirely towards GSM).

In 1997 the government divested 35% of its stake in SLT to the Japanese company NTT, which also assumed management control. Two attempts to divest its position further (in 1999 and 2000) were postponed due to poor market conditions and negative investor perception related to SLT's commercial disputes (many of which were interconnection related). In December 2002, the government finally floated 12% of its stake in SLT in an IPO, leaving it with 49.5%, NTT with 35%, and the balance (3.5%) owned by employees. In 2002, the last vestiges of SLT's monopoly

appeared destined for oblivion when the government announced its intention to institute an open licensing regime for international traffic, hitherto the exclusive domain of SLT
Sri Lanka's market-friendly policies, and low penetration rate, combined with the relatively large number of operators in such a small country, make for a competitive environment. The TRC's hands-off approach to technical standards, too, has helped foster this competition, as has the government's openness to foreign investment.

Thus far competition has made the greatest impact on the cellular market. Indeed, Mobitel, SLT's fully owned cellular subsidiary, had only a market share of 11% in 2003, making it the third largest network (out of four).

In the fixed-line market, by contrast, SLT continues to maintain an overwhelming 85% market share. Even this figure somewhat understates SLT's dominance as its network is far more dispersed – the private WLL operators are largely confined to the cities and towns – and it continues to own the vast majority of fiber capacity. In addition, as noted above, SLT has until very recently had a monopoly over international traffic, with the result that Sri Lanka's international call rates had historically been kept artificially high.

SLT's dominance has led to a considerable amount of legal skirmishing and accusations of anti-competitive practices. Early on, cellular companies faced particularly onerous terms of interconnection, and WLL operators have also had a number of interconnection disputes with the incumbent. Although the TRC has published – and, in some cases, implemented – tough interconnection guidelines, non-facilities based operators (particularly ISPs) have often had great difficulty gaining access to SLT's backbone. Some data operators have for all practical purposes been driven out of business. More recently, SLT's acquisition of the cellular company, Mobitel, as well as its provision of cheap ADSL services in Colombo, have led to concerns about cross-subsidies. SLT's impending takeover of LankaBell, one of three fixed-line providers, only heightens such concerns.

Underlying many of these disputes and concerns is the contested role (and authority) of the TRC, the independent regulator. In 2001, SunTel publicly questioned the TRC's independence , pointing out that the same individuals served as both the Secretary of the Ministry and the Chairman of the TRC. The Ministry also nominates three independent commissioners, and the Minister has authority to approve or reject the TRC's licensing decisions; the TRC has more autonomy in the matter of tariffs, which are determined in consultation with the Minister. Industry is concerned that the TRC is captive to political developments – a worry given concerns over current political uncertainty. Observers point out that, despite well-drafted laws and the TRC's often best intentions, actual implementation of policy in Sri Lanka often depends on political will.

Despite these regulatory uncertainties, a number of forward-looking decisions have recently been taken in the telecommunications arena. In late 2003, for example, the country saw the implementation of a new ten-digit numbering system, which will eventually allow number portability (although no date has yet been set for this action). The TRC had also announced its decision to implement a calling party pays (CPP) regime for cell phones on March 1^{st}, a move that analysts estimated would drive penetration from 5% to 15% by simplifying pre-paid billing packages. Significant opposition on the part of the operators to the way the Government intended to implement the regime, however, has led to its delay. In addition, a long-dormant proposal to tax international traffic for a universal service fund (the Vishwa Grama Fund, or VGF) appears to be finally getting off the ground. The government believes this is essential to righting some of the regional imbalances in Sri Lanka's network development.

Perhaps the most striking policy was the decision, in early 2003, to open up the international traffic market to an unlimited number of external gateway operators (EGOs). This decision, taken consequent to the end of SLT's international monopoly, was an expression of Sri Lanka's intent to regulate with licenses only where scarce resources are involved (e.g., spectrum), and with simple authorization procedures in all other cases. On paper, at least, the EGO policy represents a bold experiment in transparent regulation.

The immediate results of the policy were striking: over 30 EGO licenses were granted and outgoing call rates quickly dropped by an estimated 70%. It soon became apparent, however, that only established operators, who had existing networks or interconnection agreements with SLT, would be able to take advantage of the liberalized policy. Despite the TRC's many directives on interconnection, for more than a year not a single unaffiliated operator (i.e., operators who did not have existing networks) was able to secure interconnection rights. Observers maintain that the TRC was either unwilling or unable to exert its authority over SLT. This situation prevailed until early 2004, when VSNL, the former state-owned Indian operator, which had bought a gateway license for US$50,000, was finally able to secure interconnection.

At least two other important initiatives will define the Sri Lankan communications landscape in coming years. With the aid of the World Bank, the government drafted a new National Telecommunications Policy in 2001 whose main purpose was to update the Telecommunications Act of 1996. In it the government signaled its intention to move towards a converged regulatory regime and announced a Communications Convergence Act. The Convergence Act is expected to introduce a comprehensive regulatory overhaul with a view to improving the competitive environment – ending, for instance, the current licensing distinction between the provision of voice and data services. At the time of writing, the act has undergone several revisions, but appears to be on hold, presumably due at least in part to the fluid political situation.

Another important policy milestone was the passing of the Information and Communication Technology Act. Passed by Parliament in late 2003, the Act created a new implementing agency, the Information and Communication Technology Agency (ICTA) of Sri Lanka, which is tasked with overseeing a broad range of technology-related activity (the ICTA is described as an implementation agency, not a regulator). Among the ICTA's key responsibilities is the implementation of an extensive "e-SriLanka" program, which has been pledged an estimated $65 million from the World Bank. The program encompasses a range of activities, most of which are development-related, and many of which will have an impact on the country's telecommunications network. For example, the ICTA will be facilitating auctions for two Regional Telecommunications Network (RTN) licenses to encourage network rollout in underserved regions; these networks will be partially subsidized, and licenses will be awarded on a least-cost auction basis. Up to a hundred rural telecenters (Vishva Gnana Kendras, or VGKs) will also be built by the end of 2004, which should help drive demand in rural areas. And finally, a number of e-government initiatives are also likely to be undertaken, including efforts to connect the thousands of disparate government agencies and offices.

Spectrum Policy

Spectrum in Sri Lanka has generally been bundled with operating licenses and allocated on a first-come first-served basis. Typically, a new operator applies first for a systems license (e.g., in the data or voice categories), and then applies for spectrum allocations to the TRC. Operators do not pay an upfront fee but instead pay an annual fee (generally set according to ITU guidelines) for use of the radio frequency. The one exception to this policy took place in 2003 when a closed auction was held among the four cellular players for additional spectrum in the 1800 MHz range. The auction did not ignite much of a bidding war: only two of the operators actually bid, and they both paid only slightly above the minimum floor price set by the TRC. There has been some discussion about introducing a bidding system for future operators but no concrete steps have been taken.

The major bands being used by operators today are in the 800-900 MHz and the 1800-1900 MHz ranges. The former is used by GSM cell operators, and the latter by cell operators as well as by the WLL operator SunTel, which operates a DECT network in the 1880-1890 MHz range. In addition, WLL operators use some frequency in the 3.5 MHz, 10.5 MHz and 400 MHz bands. Operators also use frequencies in the above 3 GHz category for their transmission networks.

Although the TRC is to some extent constrained by existing allocations and defense considerations, it appears to be responding to the pleas of cell and WLL operators for more spectrum, and is currently in the process of clearing capacity in the 1800-1900 MHz range. In addition, the TRC has recognized that the 1900 MHz band is likely to be needed for future 3G services, and is clearing space there, too. These are expected to be the major bands available for future wireless applications.

There is also ongoing discussion about delicensing the 2.4 GHz and 5 GHz bands. These bands are currently licensed, but with the spread of Wi-Fi (and other unregulated services) around the world, Sri Lanka seems ready to liberalize allocation procedures somewhat. It seems unsure, however, whether the TRC will go for a total delicensing. More likely is an initial delicensing of indoor use (with transmit powers kept below 200mW), with perhaps a somewhat more liberal licensing regime for outdoor services (in particular, the 5 GHz band might be delicensed for rural telecenter use). The TRC is also in the process of clearing some bands in the 2.4 GHz range, as frequencies above 2.43 GHz are currently being used by other operators.

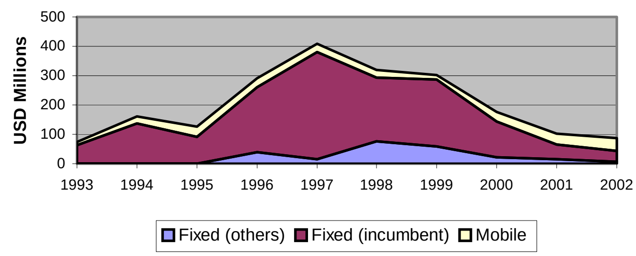
Telecommunications Market Overview

Sri Lanka's reforms have had a noticeable and positive impact on the country's telecommunications market. When reforms began in 1991, the country had less than 1 fixed line and less than 0.1 mobile connection per 100 people. By 2002, those numbers had risen, respectively, to 4.7 and 4.9. Overall, the industry has shown one of the fastest growth rates in the world, with fixed lines growing at a compounded annual rate of 20.9% between 1997 and 2002 (the seventh fastest in the world). Over the same period, cellular subscribers expanded by a CAGR of 52%.

	LInes (000s)	Density (/100)	CAGR % (1997-02)
Fixed Lines	883.1	4.66	20.9
Cellular Lines	931.6	4.92	52
PCs	250.0	1.32	N/A
Internet Users	200.0	1.05	N/A

This growth has been driven by a massive increase in investment. Since the 1991 reforms, over $1.3 billion has been invested in the telecommunications sector. Spurred by competition, SLT has invested over $434 million in its network since 1997, and it doubled its subscriber base in just the two years following its privatization. As part of the "Greater Colombo Telecommunications Network Improvement Project," the number of lines in the Greater Colombo region alone increased by 100,000 by the end of 1996. The private sector, too, has made major investments; non-incumbent investments overtook those of the incumbent for the first time in 2002. The government's decision to lift foreign investment caps in the sector has also played a crucial role. One noticeable trend is the decline in recent years: from $303 million in 1999 to $103 million in 2001 to just $87 million in 2002.[1] This trend can in part be explained by the global telecommunications bust, but it is also a reflection of worries about Sri Lanka's political situation and regulatory uncertainty.

Sri Lanka Telecom Investment



There are some other worrying gaps in Sri Lanka's overall impressive telecom market growth rates. Internet penetration, for example, remains low, at just 105 users per 10,000. Broadband penetration is infinitesimal; just one operator (SLT) offers consumer ADSL services, and only in major urban centers. Such numbers, however, are more results of supply constraints than of limited demand – and as such are as much indications of market opportunities.

Currently there is a wide regional imbalance in network development. The majority of fixed-line subscribers are located in the Western province, a reflection of the fact that the 700km fiber backbone laid by the incumbent in the 1990s did not even touch five out of the nine provinces, and only marginally touched another two. The North and the East, in particular, have been hard-hit by the war. The Northern city of Jaffna, for example, with a population of 400,000, had only 2448 lines in 2001. Rural telecommunications, too, remains underdeveloped, with only 11% of Sri Lankan villages having telephone service in 2001, and 258,000 citizens (80% of them in rural areas) on waiting lists for phones.

Province	Pop. %	Fixed lines %	GDP %
Western (Colombo)	29	64	46
Central	13	9	10
Southern	12	7	9
North Western	12	6	11
Sabaragamuwa	10	4	7
Eastern	8	3	5
Uva	6	3	5
North Central	6	2	4
Northern	6	1	3

[1] **Source:** BOI and Samarajiva, Rohan & Anupama Dokeniya, "Regulation and investment: Sri Lanka case study," World Dialogue on Regulation, January 2004 (Hhttp://regulateonline.org/2003/dp/draftpapers.htmH
Notes: 1) 1997 includes a one-time investment of $225 million by NTT for the purchase of 35% of SLT.
2) Figures do not include Telekom Malaysia's investment in its Sri Lanka subsidiary (MTN) in 1994.
3) Figures only include investments made by telephone operators (including payphone companies) and do not include ISP or data operator investments.

These regional imbalances have, predictably, led to a certain amount of market saturation, and many private players are now looking to expand their networks into underserved areas. The peace process, the upcoming auctions for Regional Telecom Network (RTN) licenses, and plans to establish a universal service fund should all help spur regional growth. A further critical step would be the addition of non-incumbent fiber capacity; such a project would both increase overall capacity in the country, and overcome some of the interconnection difficulties that private players have faced in rolling out their networks. Overall, with the right investments, and with a little more regulatory enforcement, Sri Lanka's market has ample room to grow.

Summary of Service Providers

Currently, three fixed-line and four mobile companies operate in Sri Lanka. In addition, six facilities-based data services operators are licensed, as are 23 non-facilities based operators (e.g., ISPs). Some companies in the latter category are barely (if at all) operational any longer due to the interconnection and other difficulties they confronted. There are also a variety of other licensees, including 32 External Gateway Operators (EGOs), and a number of payphone, paging and other companies. The full list of licensees can be found at the TRC website.[2] The following is a summary of the seven primary service providers.

Fixed Line Providers

	Sri Lanka Telecom	SunTel	LankaBell
Number of Subscribers	760,000 (end 2002)	72,700 (March 2001)	50,000 (Oct. 2002)
Technology	Fixed line PSTN Limited WLL service using SR Telecom and Motorola technology	Primarily DECT, using Ericsson DRA 1900. Also uses Airspan AS4000. Considering new technologies, including CDMA.	Nortel Proximity and Harris Broadband Wireless Access (BWA) system.

Source: Paul Budde Communication and industry research

Sri Lanka Telecom (SLT)

With 85% of the fixed-line market and 66% of total phone market revenues, SLT is the leading player in Sri Lankan telecommunications. SLT has over 400 telephone exchanges that cover almost the entire island; it virtually owns the backbone market, operating a 700km network of fiber. SLT is also the largest ISP in the country, with backbone bandwidth of 108Mb/s. It offers a number of services, including ISDN lines and, as of recently, ADSL service. In addition, SLT has 11% of the cellular market through its fully owned cellular subsidiary, Mobitel (see below).

SLT reported a net profit of $27.8 million for the year ending 2002, but its profits may drop this year due to the loss of its international traffic monopoly. Up to 37% of the company's revenues currently come from payments for foreign calls, and with the apparent breakthrough in the EGO controversy (see above) those revenues are likely to face significant pressure in coming years. SLT is currently planning a number of new projects, including an expansion of its ADSL services, and the ambitious "Telecom City," a 68-acre campus outside of Colombo that SLT hopes will become the home of Sri Lanka's nascent Business Process Outsourcing (BPO) industry.

[2] http://www.trc.lk/licences_cat.htm

SunTel
SunTel is a joint venture between Sweden's Telia AB, Townsend Ltd. (Hong Kong), the Metropolitan Group of Companies, the National Development Bank and the International Finance Corporation (IFC). It is the larger of two WLL operators licensed in 1996, and provides a range of voice and data services, including Internet and ISDN services. Having invested over $100 million in its network, SunTel currently serves an estimated 9% of the fixed-line market. SunTel, which reported a profit of US$365,000 in the first half of 2002, has earned a reputation for prudent network rollout, targeted at high volume clients in densely populated areas. However, in late 2002, SunTel announced that it planned to begin offering services in the troubled North East of the country, and it has more recently embarked on an ambitious plan that would add 135,000 lines within the next two and a half years.

LankaBell
LankaBell, the second WLL licensee, has about 6% of the fixed-line market in Sri Lanka. It also operates an Internet service along with a wireless broadband service (BellBurst), into which it has invested more than $83.5 million. Total network investments are estimated at over $150 million. Partly as a result of these large investments, LankaBell suffered heavy losses at its inception, but has since reportedly turned profitable. In October 2002, it was serving 50,000 customers and was planning an IPO. That IPO has, however, been abandoned, and at the time of writing LankaBell was considering an acquisition offer from SLT.

Cellular Operators

	MTN (Dialog GSM)	CellTel Lanka	Mobitel	Lanka Cellular
Number of subscribers	617,100	294,000	127,000	58,000
Technology and frequency	GSM 900/1800	GSM 900	Digital DAMPS migrating towards GSM 1800	GSM 900

Source: Paul Budde Communication and industry research

MTN Networks (Dialog GSM)
MTN Networks Pvt Ltd, a fully owned subsidiary of Telekom Malaysia (not to be confused with the South African operator with a similar name), operates under the *Dialog GSM* brand name. Although the last cellular company to launch, MTN has now become the biggest, with over 600,000 subscribers. MTN has followed an aggressive expansion strategy, investing on average $10 million a year in network rollout, and driving demand by moving into underserved markets. In addition to its core voice services, MTN also offers WAP and other mobile data and fax services. In 2003, MTN was one of two operators (along with Mobitel) to bid successfully for additional spectrum, and now operates in the 1800 MHz band along with its original 900 MHz band. At the time of writing, MTN was continuing to expand its network; it was also considering entering the bandwidth services market through its international gateway license. It recently received a $50 million loan for these projects from the IFC, one of the largest investments ever in Sri Lanka's telecommunications sector.

CellTel Lanka
CellTel, which commenced operations in 1989 on a Motorola TACS system, was the first cellular operator in Sri Lanka. It is majority owned by Millicom International (Luxembourg), with some

local partners. CellTel invested heavily in 2000 to upgrade its network to a digital GSM service, which now operates alongside its analog network. CellTel is the second largest operator in Sri Lanka. Like its counterparts, it operates in the 900 MHz band, and its network now covers virtually the entire island. CellTel also operates as an ISP (under the name Celltelnet) and offers its customers a mobile phone-based email service. Like other mobile subscribers, CellTel is currently considering an expansion of its network.

Mobitel

Mobitel was launched as a joint venture between SLT and Australian Telstra, but in 2002 SLT bought out Telstra's 60% share, making it the sole owner of a rapidly growing network. (Prior to this, cellular and fixed-line cross-holdings were not allowed, but SLT's acquisition should now allow other companies to do the same.) Mobitel operates on a dual network, employing both digital TDMA and GSM technology; it is, however, migrating its entire network towards the latter. It operates in the 1800 MHz frequency band, for which it successfully bid (along with MTN) in 2003.

Eager to expand its share of the mobile market, SLT has been making significant investments in Mobitel, and in 2003 the company became only the second cellular operator to move into the northern Jaffna peninsula. SLT will also be investing an estimated $70 million from a $100 million bond issue with the ambitious aim of increasing Mobitel's market share to 50% by 2005.

Lanka Cellular

Launched in 1993, Lanka Cellular is 100% owned by Hutchison Telecom International (Hong Kong). The company started out on a TACS network, but has since upgraded most of its users to a nationwide GSM network operating in the 900 MHz band. In the early years of this upgrade, the company witnessed an exodus of customers to its rivals' digital networks. But the upgrade, along with the introduction of innovative billing and other services, appears to have turned the company around, and it displayed a growth rate of 274.2% in 2003.

Equipment Suppliers

All telecommunications equipment in Sri Lanka is imported. In 2003, total imports in this sector were estimated at $95 million, up from $85 million the year before. The major vendors in the market are Alcatel, Ericsson, Fujitsu and NEC. The last two in particular saw their share of the equipment market increase after NTT (also Japanese) took a 35% stake in, and assumed management control of, SLT.