The Chinese state is caught in a web of conflicting interests and policy priorities as it embraces the information superhighway and prepares to open up the telecommunications service market for international competition. This article analyses the evolution of China’s telephone and cable systems in terms of the public interest and discusses current bureaucratic conflicts and policy debates over convergence and the construction of an independent broadband cable network. At stake are the very institutional and technological structure of the country’s rapidly expanding and transforming communications systems, different concepts of communication and the principles and priorities that will shape economic and social developments in China.
As the outside world was transfixed with the US-China WTO negotiations that culminated with China's agreement to open the telecommunications sector up to 50% foreign ownership, intense struggles over telecommunications reform were unfolding within China. The stakes are getting higher and the terms of the debate are shifting rapidly. Until recently, the main rivals were the dominant operator, the former Ministry of Posts and Telecommunication (MPT)/China Telecom group,¹ and China Unicom, the state-owned second carrier created in 1994 to introduce competition in the sector. With broadband and digital technologies and the rapid development of the country's cable systems, the battle between China Telecom and China Unicom has been overshadowed by conflicts between the country's telephone, broadcasting and cable sectors over market entry and the construction of a second broadband backbone network. Dubbed the 'telecommunications versus broadcasting war' in the Chinese media, these conflicts have led to bloody street battles.

At stake is not just who provides what communication services. The telephone and cable networks have different administrative and industrial structures, different degrees of commercialization and network integration, and different relations with international and local interests. More importantly, they have different operational imperatives and power bases within China's party-led state. What is being contested is the very institutional and technological structure of the country's rapidly expanding and transforming communications systems, different concepts of communication and the principles and priorities that will shape economic and social developments in China. The central question is: to what extent will any notion of public interest and of communication as a social resource shape evolving telecommunication policies in China now that the nominal socialist state has agreed to enter an equal partnership with international capital in telecommunications? This paper discusses China's evolving information infrastructure and current government policies in terms of the notion of the public interest. It analyses its conflation with the state's interest, its entanglement with vested bureaucratic interests, and its evolution in telecommunications and cable developments under a complicated web of state, commercial, as well as ideological and cultural objectives during the past twenty years.

¹ China Telecom, which encompasses the telecommunication operations under the former MPT, first registered as a corporate entity in 1995. It officially was separated from the government functions of the MPT, which was replaced by the Ministry of Information Industries (MII) in March 1998. Since early 1999, China Telecom has been in the process of being divided into four separate firms, responsible for fixed line, mobile phone, paging, and satellite services respectively. But the MPT/China Telecom/MII institutional metamorphosis is far from completed, and it is generally accepted that China Telecom is far from fully corporatized and that the MII continues to identify with China Telecom.
The public interest in Western and Chinese contexts

Definitions of the public interest in Western communications systems vary. The mechanisms for implementing and enforcing it have also differed and changed among countries and across industries within the same country. Nevertheless, it is grounded in a general understanding of telecommunications and the mass media as 'being significantly different from other industries because of their importance to the preservation of citizen's rights to be informed and to communicate freely, conditions essential to political democracy'.

The concept has traditionally been defined in telecommunications as universal service and in mass media in relation to goals such as access to media, diversity of sources, fair representation of views, and local expression. The past two decades have witnessed a major shift in regulatory regimes and the public interest has largely been redefined as a competitive market environment maintained by minimum government regulation. However, as Patricia Aufderheide has argued, even the 1996 US Telecommunications Act, arguably the most pro-market legislation in the West, does not 'challenge the notion that there is a public interest in communications, and that it is an appropriate role of government to secure and maintain it'. In the context of a capitalist economy based primarily on private ownership, the public interest notion implies a positive role of the state to balance the capital accumulation imperative of communication firms with democratic values.

In the Chinese context, the authoritarian and paternalistic socialist state claims to be the bearer of the people's interest. Until the economic reforms in the late 1970s, communications, monopolized by the state, were subsumed under the state's political interests and organized for non-commercial social engineering objectives. The reform program introduced the market mechanism into communications and aimed at harnessing the commercial imperative to deliver goods. In doing so, however, the state has also created vested bureaucratic-business interests, unleashed an accumulation imperative in communications organizations that is increasingly difficult to contain, and intensified Western pressures to enter the Chinese market. Moreover, all these have happened in a compressed fashion. While Western telecommunications monopolies achieved universal service and accumulated capital without foreign competition, China, like many other developing countries, has been forced or enticed to open up its market before the most basic universal service objective is achieved. While Western telecommunications monopolies were able to achieve universal telephone service in a relatively stable technological environment, China's market openness coincides with a period of rapid technological innovations in global telecommunications. Commercial and elite interests have intensified the tensions between the conflicting objectives of providing the most advanced services to the elite and meeting the basic needs of the majority. Finally, while Western countries have long established democratic institutions that allow at least some public participation, China is still ruled by an autocratic party state unaccountable to the public. The results are street battles between two communications arms of the government – manifestations of a communications

system laden with profound contradictions and tensions. Although the state still claims to represent the interest of the people, just what is the interest of the state, and in whose interests are communications organized or should be organized, have become increasingly problematic.

As many observers on telecommunications reform in China have noted, there are competing agendas and conflicting interests within China’s state apparatuses. Under the post-Mao elite consensus that embraces information technology as essential to national development, different players are engaged in a process of institutional bargaining and ‘coordinated competition’ that has led to the most rapid network development in the history of world telecommunications. Moreover, in a pattern that is quite characteristic of ‘world communications in today’s age of capital’, Chinese government and business players not only strategically team up among themselves, but also with foreign firms to gain bureaucratic powers and market advantages. However, as J.P. Singh has noted, the insular nature of Chinese politics also accounts for the narrowness of the telecommunications reform coalition among its privileged constituents – major manufacturing and user ministries, large national users, local governments, international equipment suppliers and service operators. Consequently, the process of telecommunications restructuring and development in China has been ‘special-interest-dominated’ and elite-driven. In fact, the undemocratic nature of Chinese politics has led Milton Mueller and Peter Lovelock to explicitly exclude consumers and labour as potential players in the telecommunications policy game regarding foreign direct investment in China.

Nevertheless, a notion of the public interest (gong yi xing) has been implicit in China’s communications system. A simple notion of an authoritarian state monopolizing communications for its own preservation is an inadequate base for analysis. With the commercialization of communications and the stratification of Chinese society, the public interest notion has recently become a subject of debate, especially around bureaucratic conflicts over convergence, and it stands uneasily with an emerging debate, especially around bureaucratic conflicts over convergence, and it stands uneasily with an emerging debate, especially around bureaucratic conflicts over convergence, and it stands uneasily with an emerging debate, especially around bureaucratic conflicts over convergence, and it stands uneasily with an emerging debate, especially around bureaucratic conflicts over convergence, and it stands uneasily with an emerging debate, especially around bureaucratic conflicts over convergence, and it stands uneasily with an emerging debate, especially around bureaucratic conflicts over convergence, and it stands uneasily with an emerging debate, especially around bureaucratic conflicts over convergence. As a growing body of literature has demonstrated, China’s economic reforms have created vast social and economic disparities. The lack of political democracy and a weak re-distributive role of the state have contributed to uneven development.

I therefore define the public interest notion broadly as equitable distribution of communicative and other social resources and a commitment to democratic participation and public welfare in social development. I begin with an

assessment of Chinese telecommunications development in the past twenty years in terms of the tensions between the public interest notion and the state’s growth imperative and special interest pressures in an increasingly market-oriented policy environment. I then examine the development of China’s cable system and discuss the origins of its public interest ethos and how it has been entangled with the party’s ideological and cultural objectives and the bureaucratic interest of the broadcasting authorities. Following this, I describe the bureaucratic conflicts and policy controversies over convergence/divergence and analyse the role of the Chinese state in these conflicts. In particular, I call attention to explicit attacks against and arguments for the public interest notion and the Chinese state’s single-minded pursuit of the information superhighway imperative. I conclude by raising questions about prospects for equitable access to communication services as China enters the post-MPT era under the WTO deal and calling attention to the social bias of China’s elite-driven information technology led development strategy.

Growth-oriented and special interest-driven telecommunications development

‘Upstairs and downstairs, electrical lights and telephones.’ This was the modern life promised by the new China to its citizens in the 1950s. But the needs of Chinese citizens have not been the policy priority in Chinese telecommunications development. The telephone was a means of elite political communication, met by a system of private networks and preferential connections during much of the pre-reform era. Consequently, the public network was under-invested and under-developed from the 1950s to the 1970s.11

The post-Mao leadership redefined telecommunications as a ‘productive force’ in the early 1980s and prioritized it as a key infrastructure essential to overall economic development. This sector was given preferential treatment in access to domestic and foreign loans, access to foreign exchange to import advanced technologies, tax breaks, and in particular, the permission to charge high installation fees to customers to accomplish its initial capital accumulation.12

Under a development regime that combined the central planning of a strong MPT and market incentives for local posts and telecommunication bureaus (PTBs), reform-era China has witnessed the fastest network build-up in world telecommunications history. By the end of 1998, China had built a fibre-optic backbone connecting all major cities and the second largest fixed line public telephone network in the world. Under the MPT’s technological ‘leapfrogging’ approach, the network was almost 100% program-controlled and digital-switched. It had a public switched exchange capacity of 135 million lines and a long distance public switched capacity of 4.83 million lines. In addition, China Telecom and China Unicom had a combined mobile phone exchange capacity of 42 million, with a subscriber base of 24.98 million, the

third largest in the world. National teledensity increased from 0.38% in 1978 to 10.64% in 1998.\textsuperscript{13}

With annual growth rate at an average of more than 20% in the late 1980s and ranging from 40% to 50% between 1992 and 1998, telecommunications has become one of the fastest-growing sectors of the Chinese economy. By 1997, China Telecom, which remains a virtual monopoly, had achieved a gross profit margin of 15% and emerged as the state’s second largest tax revenue contributor, just behind the lucrative tobacco industry.\textsuperscript{14} While China Telecom is increasingly promoting itself as a national economic champion,\textsuperscript{15} the public has come to identify it as an excessively profitable department (\textit{baoli bumen}).

Twenty years of reform, in short, has transformed telecommunications from a means of elite political communication to a prioritized infrastructure development target, and more recently, a profit-making state enterprise.

It goes without saying, of course, that China Telecom is not a single-minded profit-making machine. Network expansion, rather than profitability, has been pursued as the state’s highest interest, which is conflated with the public interest. Like any state postal and telecommunications monopoly, political and public interest considerations are built into China Telecom’s operational rationale. Building infrastructure in the periphery for the purpose of state security and national integration, providing emergency communications, cross-subsidizing postal services, charging high rates on business and international long distance users while maintaining low residential rates, cross-subsidizing high-cost and low-profit areas in national long distance operations,\textsuperscript{16} and offering preferential circuit leasing rates for science and education institutions, all reflect public interest. ‘The people’s posts and telecommunications serve the people’ is the official slogan; ‘village to village,’ that is, telephone connections for every village, is the basic universal service promise. Nevertheless, telecommunications development has been elite and special interest driven and the public interest has not caught up with network growth as market reforms intensify. The following are some of the manifestations:

### Regional disparities

As Wang Shaoguang and Hu Angang have argued, uneven development has been a deliberate policy choice of the post-Mao Chinese leadership.\textsuperscript{17} Telecommunication has been an instrument of uneven development. To attract foreign investments and to integrate with the global economy, the state prioritized telecommunication investments in the coastal regions and allowed the industry to focus on major cities.\textsuperscript{18} Moreover, as the share of direct central government investment in the sector dropped from 85.11% between 1976–1980 to 1.06% between 1991–1995 and as the regions raised most of the capital investment on their own,\textsuperscript{19} the coastal regions have benefited from quicker returns on investment and economies of scale. With growth rates in the Eastern, Central, and Western regions at 60%, 40% and 20% respectively in the sector during the early reform period,\textsuperscript{20} the gap between the rich and poor regions

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19. Wu Jichuan, The Road to Telecommunications Development in China, Xinhua Press, Beijing, 1997, p 470. In Guangdong Province, percentage of direct state capital investment (including state loans) in the sector dropped from 70.6% in 1980 to 0.06% in 1995, while share of self-generated capital investment increased from 29. 4% to 77.9%, \textit{ibid}, p 99.
had widened dramatically by the mid-1990s. In 1985, Shanghai and Guizhou, the poorest province in the Southwest, had teledensities of 2.78% and 0.29% respectively, with a near ten-fold gap. By 1996, the teledensity gap had reached twenty-fold, with Shanghai at 32.72%, Guizhou at 1.64%. In the case of mobile phone, 41.6% of the country’s 16.73 million users at the end of April 1998 were concentrated in five coastal provinces. Guangdong Province alone accounted for one-sixth of the country’s total.

Rural-urban gaps and the unfulfilled basic universal service promise

Rural-urban teledensity ratio increased from 1:1.6 in 1965 to 1:3.33 in 1988 to 1:9.05 (with an urban teledensity of 15.4%, a rural density of 1.7%) in 1997. In 1998, 62.57 million, or 71.6% of the country’s 87.37 million residential phones were concentrated in the urban area. The rural population, which is the dominant majority, accounts for 24.78 million, or only 28.4% of total residential phones. While overall telecommunication development greatly surpassed state plans and growth targets have been readjusted upwards every year throughout the 1990s, the state is far behind the ‘village to village’ target, which was written into the sector’s Ninth-Five-Year Plan (1996–2000). 45.4% of China’s 760,000 villages had telephone services in 1985. The figure stood at 55.6% in 1997. This means an average of less than 1% annual increase during a period of unprecedented network growth. Although an intensive effort had lifted the figure to 67.1% by the end of 1998, as Ministry of Information Industry (MII) official Lui Cai acknowledged, it is highly unlikely that the ‘village to village’ target will be met by the year 2000.

Prioritized investment in higher end services

While investment in the postal system dropped from 6.1% of total sector investment between 1981–1985 to 3.68% between 1991–1995, mobile phone has been regarded as ‘the priority of all priorities’ since the early 1990s and received far more investment than the postal system. China Unicom, the result of an anti-MPT alliance among major government ministries, state conglomerates, and the state’s instrument to introduce market competition to the sector, began by competing with China Telecom in the mobile phone sector in 1994. Although it only accounted for a mere 2% of the mobile phone market by the end of 1997, its entrance has significantly accelerated growth, spurred multinational equipment suppliers to sell the most advanced technology to China, driven down prices, and benefited elite users. In some places, price wars between China Telecom and China Unicom have threatened the profit margins of the mobile phone sector and led to alleged price cross-subsidies in which local PTBs used other revenues to subsidize mobile phone operations. The state had to intervene to ensure the sector’s high profits, which are used to finance overall network expansion.
investment in mobile phone services has meant that the upper social strata have both fixed line and mobile phone services.

**Rates restructuring in favour of specialized and elite users**

Starting from 1990, postal and telecommunications rate reforms have led to increases in postal and local telephone rates, and drops in international long distance rates, internet access fees, and fees for leasing special lines. Telephony had historically cross-subsidized postal services. Postal rates were kept very low in the first 40 years of the People's Republic. In 1990, the state raised the postage for regular letters by 150% and for parcels by 100%. In December 1996, the rate for a regular local letter was raised again by 400%, for a regular domestic letter by 150%, and for print matters by 300%. As part of the 1998 government reorganization that dismantled the MPT, the state separated postal and telecommunications operations and freed China Telecom from cross-subsidizing postal operations. In March 1999, however, the government again implemented a 20% increase for local letters and a 60% increase for out-of-town domestic letters. If the 1990 raise was to catch up with inflation, the 1996 and 1999 rate changes were structurally in favour of minority users. With a teledensity of just above 10%, the social bias in postal rate increases is evident. Telephone rate readjustments have similarly favoured elite and special users. While the March 1999 rate adjustments reduced telephone installation fees and helped to popularize the telephone, state-recommended residential telephone rates were increased by 58% on average. Meanwhile, rates for international long distance calls, the lease of analogue and digital circuits, and especially internet access fees, have dropped steadily in the 1990s. Here again, the state has asked the majority to pay more to finance the use of advanced services by the minority.

**Increased profit orientation of the sector and the entrenchment of MPT/China Telecom as a special interest group**

Although China Telecom is not ‘the profit-motivated firm of neo-classical economy theory,’ it ends up being a highly profitable state enterprise. To be fair, China Telecom did not become a highly profitable operation under circumstances of its own making. The state has not only given it preferential policies to build a national infrastructure, but also wants to maximize its contribution to overall economic development and even uses a portion of the telecommunications revenue surplus to subsidize its other interests. As Gao Songge, a China Telecom spokesperson explained, telecommunications rates were set by the state, and ‘the tens of billions of telecommunications fees are the most reliable income for Zhu Rongji’s pockets’ [i.e. the state treasure]. Gao even explained that if China Telecom were run as a business, it could have been happy with an 8% profit margin. Nevertheless, the MPT/China Telecom group has taken advantage of the state’s high-growth, high-accumulation policy and become a vested interest group. With monopolistic control of a scarce resource, preferential...
treatments, and little public accountability, this group is notorious for its poor services, arrogant attitudes, and arguably one of the most-spoiled households under ‘socialism with Chinese characteristics’. Market-oriented reforms have significantly increased China Telecom’s commercial orientations and encouraged corporate behaviours in the 1990s. Operating revenue, productivity, rates of capital appreciation and percentage of postal and telecommunications revenue in the GDP were adopted as enterprise evaluation criteria under the financial responsibility system and as corporatization began in the mid-1990s. If the sector’s officials have bureaucratic power to expand, the sector’s employees have an economic stake in its growth and profitability. The MPT’s 1988 wage reform scheme, for example, effectively tied the sector’s employee salary with overall revenue growth. This scheme was revised in 1995 to link employee income with each enterprise’s per capita revenue and the sector’s overall profitability and efficiency.40 As further evidence of the MPT’s profit/efficiency considerations, it implemented a zero employment growth policy in 1994 and its workforce had dropped from 1.14 million in the early 1990s to 1.13 million by 1996.41 The MTP/China Telecom bureaucracy had become a privileged group, with some of the best working conditions, highest salaries and benefits in the state sector. The sector’s increasing corporate rather than state or public service mentality can be further seen in such practices as unauthorized price wars with China Unicom and street battles with broadcasting authorities over the cable television market.

**Oversupply of public network capacity and private network bypassing and liberalization pressures**

By the mid-1990s, the MPT’s fast growth/high price/high profitability strategy had created an oversupply of telephone capacity. Although this may be partially blamed on poor administration where it is easier to put in switching capacity than to put in the local loop, with average installation fees still as high as 1,500 yuan ($180) in 1998,42 the majority of Chinese households simply could not afford a phone.43 Telephone over-capacity by the late 1990s is part of a general overproduction crisis in China. This in turn can be largely attributed to uneven development and the concentration of wealth in a very small section of the population and the weak spending power of the majority.44 Growth rate in fixed line users began to decline in the mid-1990s. National telephone installation rates stood at below 56% of available lines, and less than 40% of existing communicative capacity were being utilized in 1998, compared with average international rates of 84.84% and 73.5% respectively.45 Middle class family budget considerations mean that telephone usage among subscribers, especially uses of long distance lines, have been limited. Data transmission and Integrated Services Digital Networks (ISDN) are even more under-utilized.46 Moreover, the public network’s over-capacity has been aggravated by the bypassing private networks of government ministries and large state enterprises. These networks emerged in the 1970s and have

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42. The annual net income of an average rural resident in the same year was 2,150 yuan, or $259.
43. The application of network economics may help to alleviate the over capacity problem to some extent, and the government’s 1989 rate adjustments reflects a shift from rationing access on a low capacity network by high installation fees to a lowering of access fees and a raising of usage fees. But given the low volume of usage, this could create a crisis in accumulation. For example, while price cuts in response to consumer pressures in 1999 have increased telephone installation and reversed the year-on-year decline in fixed-line user growth, the industry could witness a 20% drop in fixed-asset investments, the first time in many years. Wang Hui, ‘Telecom sector requires further reform’, http://www.chinadaily.net/cndy/history/1999/11/d4-1tel.b25.html.
46. In Hunan, the provincial PTB invested more than 20 billion yuan ($2.4 billion) to build a fibre-optic network that reached most townships, but only 20–30% of its ISDN network capacity was being utilized. Wang Xiaoliang, ‘Strategies for the development of China’s telecommunication industries’, Industrial Forum, 1999 special issue, p 1.
caught in the web
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been expanding rapidly, with the MPT’s initial inability to meet their special needs, high leasing fees, and the increasing commercial considerations of large institutional users. Although the MPT has been pushing for the merger of special networks with its public network, its share of the overall telecommunications infrastructure continues to decline throughout the 1990s. Moreover, these special networks are not only bypassing the public network, but also eager to compete for commercial customers. Since the mid-1990s, ‘serving the two markets’ (private and the public) has become the slogan of many private networks.

Revolt of urban middle class consumers

As a legacy of the telephone as a privileged means of political communication, the government used to pay the installation fees and the bills of its officials’ residential phones. Starting from the mid-1990s, the government began to change this practice and make the entire bureaucratic strata conscious of their own residential phone bills. Meanwhile, with residential telephones accounted for 79.8% of total phones by 1998, the urban middle class had become the main telecommunications user group. Its most articulate segment, the professional and educated elite, began to complain loudly about high charges and poor services. Increasingly conscious of their own economic interests, some have taken China Telecom and its local affiliations to courts for overcharging. Others began to demand shares (although China Telecom is not a shareholding corporation) for installation fees paid toward the initial capital accumulation of the public network. Since 1997, the increasingly commercialized media have become conduits for consumer frustrations over China Telecom. They embrace the information age rhetoric, indulge in the ‘three-networks-in-one’ technological wonderland, and champion market liberalization on behalf of middle class users no longer willing to finance the high wages and benefits of telecommunications workers and pay extra shares to bring the rest of the population into the information age. Having seen the benefits of market competition in the mobile phone sector, China’s rising urban middle class are confident that they will be the beneficiaries of market liberalization. Their cosmopolitanism and their integration with the global consumer culture have made them increasingly impatient with the range of services offered by the state monopoly. Although unorganized, their voices have dominated public discourses, resonated with the pressures of international capital and anti-China Telecom domestic institutional players, and contributed to rate cuts in international long distance, mobile phone, and other value-added services in recent years. Adopting a market discourse and seeing telecommunication service as a commodity, rather than a public good, they have redefined public interest as their own ‘consumer interest’ and challenged China Telecom as a champion of national development and as representing their interests. A telecommunications development regime that conflates the state’s interest with the public interest, which in turn, has been reduced to the sectoral interest of the MPT/China Telecom group, has been challenged. A notion of the consumer interest as the public interest, realized through a liberalized market, has emerged.

47. In 1993, the MPT accounted for 82.3% of total fibre-optic capacities in the country. By 1996, this had dropped to 68.7%. Four other government ministries – railway, petroleum, electrical power, and the MRFT – accounted for much of the rest of fibre-optic capacities, see Wang Xiaoqiang, op cit, Ref 46, p 9.
48. Rather than simply eliminating public subsidies, the state allocated monthly telephone allowances to government officials according to their ranks. This way, an official either has to pay for extra expenses or can keep the unused portion of the telephone subsidy.
In short, while China's rapid network growth has been remarkable and the state has stepped up its effort to extend services in the poor and rural areas in the past two years, this has been a highly uneven development. Moreover, the tensions between the extension of services and the growth/accumulation objectives, and between the interests of existing telecommunications users and the state monopoly, are intensifying. The notion of the public interest as universal service achieved through price cross-subsidies remains relevant in principle but has been compromised in practice. Meanwhile, a notion of the public interest as consumer interest achieved through a competitive market has been articulated in public discourses on telecommunications reform on the eve of the sector's opening up to international capital.

Public interest and the evolution of the cable television network

In contrast with the telephone network, China's cable television system has been developed from the bottom up and without the state's organized effort – at least until the mid-1990s. Cable television systems originated in dispersed community antenna systems in urban residential areas during the late-1970s to the early 1980s.

Starting from 1983, large state enterprises, as the principle bearers of China's limited version of welfare state in which employers not only provided jobs, but also housing and other social services, began to develop cable television as a welfare benefit for employees. Public service was one of the legacies of early cable television in China. No or very little cable access fees were charged; almost all television households in the living quarters of a state enterprise were connected. Community communication is another legacy of early cable television. In addition to provide better access to outside television signals, state enterprises used cable technology to meet internal communication needs. The country's first cable network, established in 1983 by the Beijing Yanshan Petroleum Factory, for example, offered local news, courses in general and technical education for workers, and variety shows reflecting the social and cultural life of workers.

This lead to two additional characteristics of cable television in China: the vertically integrated 'network and station in one' structure, and self-financing. There was no separation between multi-system operators (MSO), which built the cable network and carried over-the-air television signals, and cable programmers that provided content. Each cable station was simultaneously a local network builder, multi-channel operator, and content producer. At the same time, since cable television was very much a local initiative and considered a non-essential service by the state, there was little direct state investment. Self-financing was a basic feature of cable television.

Finally, although there was initial confusion over state regulation, and various government departments were involved in licensing, cable television was brought under the
administration of the country’s broadcasting authorities. The Ministry of Radio, Film, and Television (MRFT) at the central level, and local broadcasting bureaus were designated network and content regulators. Unlike the MPT, however, the MRFT did not play any significant planning, financing, and management role in early cable development. It limited its role to licensing and was rather relaxed in issuing licenses to any government units and state enterprises with the money to provide cable television.

Starting from 1985, municipal governments began to develop cable networks. Because local governments did not have adequate financial resources to subsidize network construction, they charged installation fees at households. Unlike the telephone industry, however, the tradition of free over-the-air broadcasting and the free community cable model of large state enterprises prevented local governments from charging high fees. Cable installation fees from the late 1980s to the late 1990s ranged from 80–300 yuan ($9–$35), and monthly cable bills were between 5–12 yuan ($0.7–$1.5), much lower than telephone fees and one of the lowest in the world. The telephone began as a political privilege and remains a symbol of social privilege. Cable television, in contrast, has been accessible to ordinary households in an entire neighbourhood at the very beginning.

With municipalities replacing large state enterprises as main cable network builders and operators since the late 1980s, the development of cable took a quantum leap. Municipal governments found in the cable station a new propaganda organ and promoted the cable station/network as one of their ‘serving the people’ public welfare projects. Poor county governments that had not been able to establish an over-the-air television station in the 1980s jumped to the opportunity of building a cable station in the 1990s. Consequently, cable television took hold not only in large cities, but also in many rural areas. By the end of 1997, there were more than 1,300 state approved cable networks/stations at and above the county levels, with more than 70 million subscribers. With a penetration rate of 17% and an addition of 5 million cable households per year, cable television, the latecomer and neglected child of the state, reached more households than telephony.

At the same time, municipalities have helped to bring cable television into the orbit of the party state. Although political control is more relaxed in this sector, like over-the-air broadcasting, the municipal cable television station has become another party propaganda outlet. In order to maintain political control and following a tradition of government monopoly in broadcasting, the MRFT, in its cable regulations throughout the first half of the 1990s, stipulated that there can only be one network at each level of government administration. This is known as the ‘one locality, one net’ policy.

As a network that was built from the bottom up, cable suffers from a number of structural shortcomings from the perspective of broadcasting officials who had realized the technological and commercial potentials of a national broadband cable network by the mid-1990s. First, there is a lack of network integration. Various state enterprises and municipalities built their own independent, dispersed networks and there was a lack of interconnectivity and
technical compatibility between various networks. Second, while the telephone industry adopted the technological ‘leapfrogging’ policy, the cable industry, without state investment and the technological leadership and commercial imperative to exploit the two-way communication potentials of a broadband network, adopted the ‘appropriate technology’ approach in the early 1990s. Technological standards among the country’s cable systems were highly inconsistent. 58 Third, unlike the telephone industry, in which the vertical power of the MPT over local PTBs was primary, horizontal power – the power of various levels of government over broadcasting and cable – is primary. The organization of broadcasting in China adopted a ‘three-in-one’ structure. At the central level, the MRFT was a combination of a broadcasting regulatory body, a network builder and operator, and a propaganda organ – it directly controlled broadcasting stations and the Minister was the highest editorial authority of affiliated broadcasting stations. The overriding objective of the MRFT was to ensure the correct editorial orientation of the three affiliated national networks (Central People’s Radio, China Central Television or CCTV, and Radio Beijing) and the reach of the voice of the central Party leadership to all corners of the country. Local broadcasting authorities operated under the same structure. While they were under the dual leadership of the MRFT and the local government, they have stronger links to local government than to the MRFT. Although a cable network improved the clarity of CCTV signals, it did not improve overall population coverage (cable systems were mostly built in urban areas and in rural areas where reception of CCTV was already guaranteed). Moreover, by producing local programming and making more television channels available, CCTV faced more competition. Consequently, the MRFT initially had little incentive to facilitate the development of cable networks.

Until the mid-1990s, the MRFT’s primary technological means of transmission was microwave and satellite. While it has always made use of network capacities of other government departments, including that of the MPT, it depended primarily on its own special network for program transmissions. 59 In addition to many of the common reasons that led the MRFT to develop its own transmission network, the political importance of broadcasting has been another significant rationale. In the mid-1990s, with satellite transmission of national radio and television programs, the MRFT promoted the deployment of small satellite ground receiving stations in remote areas to increase the population coverage of national radio and television signals, which stood at 84.2% and 86.2% respectively at the end of 1996. To the MRFT, ensuring the reception of broadcasting signals in remote and poor areas was an essential task, while the development of cable networks in urban and rich rural areas was a luxury.

If the cable system was technologically less sophisticated, structurally less integrated, and had a weaker vertical administrative structure unfavourable to the development of a national network, it was also less commercialized than the telephone network. 60 Cable networks/stations were set up as self-financing operations and many were able to make profits through fees and advertising. However, cable networks/stations have also been considered part of the

58. The state standard for bandwidth was initially set at between 300MHz and 450MHz in 1992. In three years, however, it had shifted to 750MHz, the bandwidth appropriate for two-way communication. Of the country’s 70 million cable subscribers at the end of 1996, 10 million were at 300MHz, 20 million were at 450MHz, 20 million were at 550MHz. Another 20 million were at 750MHz. Ma Ming and Tan Yajun, ‘Current situation and prospects for internet services over China’s broadcasting network’, Radio and Television Information, December 1997, pp 15–18.
59. As of 1996, this network consisted of 746 medium and short wave transmission and relay stations, 42,000 FM and television microwave transmission and relay stations, 18 satellite up-link stations, 22 special satellite transponders, and 130,000 satellite receiving stations. At the end of this system were more than 300 million television sets; ibid, p 13; Sun Jiazheng, ‘Accelerate the construction of the broadcast network, promote the state’s cause of informatization’, Radio and Television Information, October 1997, pp 3–6.
60. I am referring to network access structure, not cable programming, which is more commercialized than over-the-air television. See also, Lovelock, op cit, Ref 5.
Party’s propaganda and cultural enlightenment operations. The growth/accumulation imperative is less strong in this sector. Moreover, while the telecommunications sector has a greater integration with domestic and international capital through loans and more recently through stock offerings by China Telecom (Hong Kong), the cable sector has little external capital involvement. Foreign investment in the construction of broadcasting and cable facilities is prohibited.61

The battle over cable network construction and the ‘great leap’ in cable build-up

As China’s leadership embraced the latest information technologies and jumped onto the information superhighway bandwagon in the mid-1990s, the country’s state-of-the-art telephone network suddenly appeared obsolete: a broadband cable network was seen as the future.

The MRFT, meanwhile, began to realize the commercial value of a nationally integrated broadband cable network and considered itself to be the builder and operator of this network. It wanted to bypass the MPT’s backbone and build an independent network. The MPT, meanwhile, argued that since it had already built a national backbone network, a full-blown independent cable network would be an unnecessary duplicate construction. To the local PTBs, entry into cable television served several commercial imperatives: the use of its under-utilized transmission capacities, monthly cable fees, and the prevention of the broadcasting industry from becoming a competitor in basic and value-added telecommunications services.

Consequently, starting from the mid-1990s, the PTBs began to ignore broadcasters’ state-sanctioned monopoly in cable television and got involved in the construction and operation of cable television networks. Some local governments, with no particular loyalty to the MRFT in Beijing, allowed the local PTB to construct cable networks. In other cases, local broadcasting authorities, which have less financial resources at their disposal, were attracted by the PTBs’ deep pockets and entered joint venture cable construction agreements with the PTBs. Most local broadcast authorities, however, mobilized all political and financial resources to defend their monopoly. There are all forms of compromises, competition, conflicts, and violations of existing broadcasting regulations in this relationship. In Shanghai, the broadcasting authority originally bought the PTB’s argument for avoiding ‘duplicate construction’ and leased the PTB’s fibre-optic lines for its cable network. However, after paying high leasing fees for several years, it decided to build its own backbone network.62 In Beijing, both the PTB and the broadcasting authority submitted a bid to build the city’s cable network. After careful expert analysis, it was decided that it was more economic for the broadcasting authority to build a new broadband network. In Hainan Province, the cable television network was built by the PTB, while the broadcasting authority has been controlling programming.63 In many other areas, conflicts between the two departments

61. There are exceptions in actual practice. See Shoesmith, op cit, Ref 50, for a case in Wuhan, where the cable system had investments from Taiwan.
63. See Lovelock, op cit, Ref 9.
have resulted in cable service disruptions and armed confrontations that have injured more than one hundred people.\(^{64}\)

Although the broadcasting authorities have not given up much ‘territories’ to the PTBs, the PTBs’ actual and attempted involvement in the cable industry has become an impetus for the MRFT to pursue an aggressive cable network build-up strategy. Suddenly ‘the national cable television network’ became the MRFT’s buzzword and received high policy priority.

In 1995, the MRFT drafted ‘The Overall Plan for the National Cable Television Network’, upgraded the technological standards for cable networks, and began to assert more vertical power and create the institutional structures to build and operate a ‘digital, broadband, and multifunctional’ national network. Specifically, the MRFT had pursued the following:

### Network upgrading and integration

As the first phase of building a nationally-integrated cable network, the MRFT mobilized 14 provincial broadcasting authorities to undertake an all-out effort in upgrading existing cable networks, interconnecting dispersed networks, deploying fibre-optic trunk lines, and promoting intra-provincial and inter-provincial interconnectivities. With the MRFT providing fibre-optic lines and local broadcasting bureaus covering engineering costs, another ‘Great Leap Forward’ in telecommunications has been under way since the mid-1990s. By the end of 1997, more than 26,000 kilometres of fibre-optic cable television transmission lines had been laid, reaching more than 1,200 counties and 400 cities.\(^{65}\) As of August 1999, state-level fibre-optic trunks had linked 21 provinces. Intra-provincial networks had been fully or partially connected in 13 provinces.\(^{66}\) The MRFT’s plan was to build a nationally connected broadband cable network by Year 2005. Using this cable network as the backbone, the MRFT was in the design stage of building a computer Intranet in the whole country. This network would cover more than 600 cities and most counties and towns, connecting to each city’s cable television networks, and consisting of fibre-optic, satellite, and ground digital microwave trunk lines and local cable wires. It would be able to provide data and other multi-media services to all cable television subscribers.\(^{67}\)

#### Technological experimentation

By the end of 1998, broadcasting authorities had teamed up with domestic and foreign players such as Sun Microsystems to undertake a wide range of experiments in cable modern technologies and multi-functional CATV networks in various cities. In Shenzhen, the HFC network is said to be able to provide internet connections, stock trading at home, video on demand, video conferencing, IP telephony, and other services. Other emerging integrated CATV networks, including those in Beijing, Qingdao, Guangzhou, and Shanghai, are equally sophisticated and already providing network services to government and business users on a limited basis.\(^{68}\)
Divergence and the corporatization of network functions

To converge with the telecommunications industry, the MRFT undertook a divergence exercise – separating its network functions from programming functions and creating a quasi-business entity, the Radio and Television Information Network Centre, in May 1997. The Centre is responsible for the construction and management of the national cable network, the transmission of broadcasting and other information services, the interconnection of computer networks affiliated with the country’s broadcasting bureaus, and the provision of internet and other value-added services to society. With the establishment of this Centre, the country’s cable industry has a national planning and managing body, and as its mandate indicates, it attempts to engage in a full range of broadcasting, information, and telecommunications services. In March 1999, the Centre further announced the establishment of the China Cable Television Networks Corporation in order to accelerate the construction of the national cable network and to promote its commercial applications. The country’s highest broadcasting administration has thus corporatized its network functions and built the institutional structure for offering internet and telecommunication services.

Public opinion offensive

In comparison with the print media, broadcasting authorities have been more restrained in attacking China Telecom and championing for market competition. Their own monopolistic status in broadcasting and cable raise the suspicion of hypocrisy and a conflict of interest. Still, radio and television outlets have been active in promoting the ‘information superhighway’ agenda in general, and in amplifying the anti-China Telecom sentiments in particular.

Current regulatory framework and the role of the state

As Vincent Mosco has noted, ‘Convergence is neither natural nor new.’ In the Chinese countryside, it was a common practice to use wired radio lines to transmit telephone signals during the pre-reform era. But when a local broadcasting bureau in Shandong Province began to provide cheap cable telephony to thousands of peasants in the mid-1990s, the telephone authority refused interconnectivity simply due to commercial considerations.

While new convergence technologies are an important reason for rivalry between the telecommunication and broadcasting authorities, the broader political and social contexts have been the commercialization of telecommunications, and more recently, broadcasting and cable, and the ruling elite’s embrace of the ‘information superhighway’. As Dwayne Winseck has argued, technological factors do not determine how media are organized, controlled, and used. ‘Instead, the primary drivers of media evolution are
machinations between governments and industries, visions of how markets should evolve, and ideas about whether communication constitutes just another commodity or is something more imbued with cultural considerations and public service values.\textsuperscript{74}

The unfolding Chinese story clearly supports this observation. It is worthwhile to recall that China’s economic reforms began with the leadership’s embrace of the ‘four modernizations’ – agriculture, industry, national defence, and science and technology. Wei Jingsheng, the worker-turned dissident, advocated democratization as the master of all modernizations. While aspirations for democratization have been persistently suppressed, the leadership has embraced ‘informatization’ as the master of all modernizations. To use party General Secretary Jiang Zemin’s slogan, ‘None of the four modernizations would be possible without informatization.’ Although many outsiders have perceived information technologies as incompatible with authoritarian rule, for China’s leaders, they are a means of macro-economic control and a solution to ‘China’s gargantuan economic coordination problems.’\textsuperscript{75}

When the idea of an ‘information superhighway’ was promoted in the US by the Clinton-Gore administration in 1992, the Chinese leadership quickly jumped onto the bandwagon. The issue is no longer just the recognition of telecommunications as a productive force. Nor is it just the informatization of the national economy and society. It is the promotion of information industries as a ‘new point of economic growth’ – as government and media rhetoric repeatedly put it, and as state-owned communications agencies such as China Telecom have increasingly come to embody. Just as Mao was trying to catch up with the West through industrialization, the current leadership is trying to catch up with the West through the commodification of information and communication services. At a time when the state dismantled other industry oriented government ministries, the creation of a super-ministry, the Ministry of Information Industry in March 1998, has both substantive and symbolic implications.

While the jury is still out as to whether information systems have helped the state to achieve better macro-economic control, the largest problem of macro-control has been in the information and communications sector itself. As part of the transition from a planned economy to a market economy, government bureaucracies themselves have become increasingly commercialized. The ‘profit motive’ becomes endemic.\textsuperscript{76} Attempts at separating government and business have meant little. Financial devolution and the state’s inability to pay a standard salary means that the personal incomes of public sector employees are closely linked with the income-generating capacities of their affiliated departments and enterprises. This further creates a mercantilist mentality in state bureaucracies. Instead of seeing government ministries as different parts of a government body serving some coherent ‘national’ or ‘public’ interests, it may be more appropriate to view them as warring feudal lords fighting over enclosure in early capitalism.\textsuperscript{77} Government departments’ monopolistic control of communication networks and information resources have made the government/business complex in this sector particularly complicated and the bureaucratic battles most ferocious. While bureaucratic commercial interests have sometimes undermined the state’s ideological control objective,\textsuperscript{78} their


\textsuperscript{72} Fang Hongyi, ‘Rethinking,’ op cit, Ref 49, p 39.

\textsuperscript{73} Bai Jun, ‘Well water doesn’t mix with river water’, Information Industries News, 8 March 1999.


\textsuperscript{75} Mueller and Tan, op cit, Ref 4, p 57; Lovelock, op cit, Ref 5.

\textsuperscript{76} Mueller and Lovelock, op cit, Ref 5, p 18.

\textsuperscript{77} A broadcasting bureau chief I interviewed on 28 July 1999 actually used the term ‘enclosure’ to describe the competition between different government departments over the cable television market.

\textsuperscript{78} For example, the satellite dish manufacturers’ commercial objective to sell their products are in conflict with the state’s desire to ban unauthorized satellite television reception.
bargaining frenzy and their strategies of defending existing power bases and expanding resource bases have helped to push forward the state’s network growth objective. The result is an out of control telecommunications build-up that does not necessarily serve a balanced social development strategy. Foreign equipment suppliers have been one of the largest beneficiaries.

In the late 1980s and early 1990s, the chief rivals had been two vertically related ministries in telecommunications: the old MPT and the former Ministry of Electronics Industry (MEI). The MPT’s policy of purchasing the most advanced technologies from foreign manufacturers and supporting the former MRFT’s own vertically integrated equipment manufacturers struck a heavy blow on the MEI, which had been the main telephone switch supplier. In 1998, the state merged the MEI, the MPT, and the network planning functions of the MRFT and other related government bodies to form the MII. The MII is supposed to be a single government planning and regulatory body in charge of all information industries. Its mandate is to promote the country’s electronic, telecommunications, information, and software industries, to make and implement rules and regulations, and to coordinate the overall planning of the country’s public and private communications networks, including the broadcasting and cable networks. All equipment makers and telecommunications services providers were to become independent businesses. In the interpretation of Zixiang Tan, this is a typical case of a technology-driven ‘institutional convergence.’ The new pro-convergence regulatory regime is supposed to ‘lead to a highly coordinated and balanced structure for China’s internet regulation.’

However, the government re-organization did not follow the demands of an autonomous technological logic. Bureaucratic interests and ideological issues inevitably came into play. The re-organization prevented the convergence of broadcasting and telecommunications industries and failed to sort out the relationships between ‘information industry’ and ‘broadcasting and cable operations.’ Although rumor had it that the State Council had intended to abolish the MRFT altogether, the result was not only less radical, but also one of anti-convergence, with an aspect of divergence. While the MRFT was eliminated in name and its network planning function was officially transferred to the MII, the government failed to abolish the MRFT in reality, due to strong resistance from MRFT bureaucrats and pressures from the Party propaganda department. The power of the broadcasting authority was downgraded, with its official status changed from a ‘ministry’ to a State Council affiliated ‘general bureau.’ But the MRFT, now renamed State Administration of Radio, Film and Television (SARFT), not only retains its ministry-level official rank, but also retains its administrative powers over the country’s broadcasting and cable operations. The government’s divergence plan – with the MII in charge of frequencies and the planning of broadcasting and cable networks and the SARFT in charge of the provision and regulation of broadcasting and cable content, ran into strong resistance from broadcasting and cable officials. As the newly-established MII was supervising the restructuring of China Telecom and implementing other major telecommunications reform initiatives, the SARFT, citing Deng Xiaoping’s dictum that ‘development is an irrefutable argument’, has been aggressively implementing its plan of building an

79. Lovelock, op cit, Ref 5, p 280.
80. For more analysis on this, see Mueller and Tan, op cit, Ref 4.
independent broadband backbone network. Large municipal cable networks, fearing a ‘takeover’ by the MII, took control of their own infrastructure and connected themselves to the SARFT backbone.84 As of mid-1999, the MII’s regulatory function over the national cable infrastructure, as one broadcasting official observed, was on paper only.85

If anything, the March 1998 re-organization intensified old conflicts between the MPT and the MRFT. The fact that MPT’s long-term Minister, Wu Jichuan, became the Minister of MII added further suspicion of the MII’s linkage with China Telecom and the persistence of the MPT’s old institutional mentality. Moreover, the MII, with its strong basis on the old MPT, does not have the expertise to deal with convergence and networking – ‘they can take over our network operations, but we will not give them any of our network personnel’, one broadcasting official said in an interview in August 1998. This has further undermined the authority of the MII over the cable network. Ministerial-level conflicts have repeatedly reached the State Council. Premier Zhu Rongji and his deputies have been ruling by decree on various conflicts between the MII and the SARFT. The institutional convergence has not worked. An early 1999 policy directive, originated in various ‘written instructions’ of vice-premiers in response to reports submitted by the MII and the SARFT over conflicting issues, was issued as a MII-SARFT joint circular. It adheres to an anti-convergence policy: ‘Before the establishment of a relevant law, telecommunications enterprises are prohibited from being involved in radio and broadcasting operations (including wire and wireless); broadcasting departments are prohibited from engaging in telecommunications activities’.86

The ‘relevant law’ refers to the yet-to-be-born telecommunications law, a state law long in the formulation. One of the thorny issues in the convergence debate is the dual propaganda/commercial character of broadcasting and cable operations. Although these operations have been rapidly commercialized, they do not have corporate status and are officially not part of the ‘information industry’ – the MII therefore has no authority to regulate their operations. Moreover, although SARFT’s status is lower than that of the MII within the State Council, its unique dual leadership structure – it reports both to the State Council and to the Party’s propaganda department – means that it has an extra and arguably stronger power base in China’s party-led state than does the MII. In a way, the struggle over the control of the country’s cable networks has become a de facto struggle between the State Council and its overriding economic rationale, and the Party’s propaganda department and its ideological imperatives. Despite its embrace of the market, China’s party-led state is not prepared to treat broadcasting and cable as just another sector of the ‘information industry’. Rather than formulating an all-encompassing state law covering telecommunications, broadcasting, and cable, the likely next step is an industry regulation covering the telecommunications sector alone.87

84. ASIACom, ‘China cable industry changes to accommodate SARFT,’ 20 April 1999, pp 1–2.
86. The Ministry of Information Industry, the State Administration for Radio, Film, and Television, ‘Circular on ensuring the good transmission of broadcasting programs’, 12 February 1999.
87. Personal interview, 18 August 1999, Beijing.
The debate on telecommunications reform, the SARFT, and the public interest argument

In its effort not only to maintain control over the existing cable network, but also to build and expand it into an integrated national network and engage in internet and other telecommunications services, the SARFT has been pursuing a number of arguments in the ongoing policy debate.

First, it seized the government’s information superhighway initiative and presented the broadcasting and cable network as the main lane of the country’s ‘information superhighway.’ Existing and potential features of the network – its broader-than-telephone reach and its multi-functional broadband potentials become key selling points in policy battles within the state. Broadcasters, for example, scored a major point when Vice Premier Zhou Jiahua, leader of the State Council’s ‘Informatization Leadership Group’, the highest party-state authority in charge of informatization and the coordination of various government bodies before the MII was formed, offered the inscription ‘developing multi-functional services, promoting informatization’ during his visit to the Shenzhen Cable Television Network in 1996. This has been promoted as an official endorsement of cable television’s entry into internet and other information services. In a 1997 national conference to promote and coordinate the state’s informatization objectives, the broadcasting and cable network was officially recognized as one of the three networks (together with the telephone and computer networks) consisting of the country’s ‘information superhighway’. Within this context, the construction of an independent national cable network became a state, rather than a ministerial imperative.

While pro-MPT/MII/China Telecom interests mobilized the ‘duplicate construction’ argument to prevent the emergence of an independent backbone cable network, pro-SARFT arguments not only insisted on the necessity of such a network, but also saw it as eventually the only necessary network in the future. Fang Hongyi, chief engineer of the SARFT’ Network Centre, for example, argued for increased market competition in telecommunications, the construction of an independent broadband cable network, and its entrance into the internet business (currently China’s broadcast and cable authorities are not allowed to provide internet services). According to Fang, this would force China Telecom to lower its fees for internet access, stimulate internet use, and lay the ground for the replacement of the telephone network first by a HFC cable network and then by a complete fibre-optic network.  

Second, the SARFT solicited support from the party’s propaganda department to maintain its monopoly on cable television by emphasizing its party mouthpiece character. It argues that cable is a special industry and must be monopolized by the state through its broadcasting authorities at various levels. Moreover, to ensure the smooth transmission of the party’s voice, the physical network must be under the control of the broadcasting authorities. As one high-level broadcasting official noted in an interview, if broadcasting authorities were forced to depend on others to deliver its content and are subjected to commercial principles in leasing transmission lines, they would be unable to afford the market rate and therefore unable to fulfil the party’s propaganda duties.

88. Fang Hongyi, ‘Rethinking’, op cit, Ref 49.
Finally, the SARFT has recently articulated the public interest notion in defence of its monopoly in cable television. This is an important development and the implications are still unclear. As discussed earlier, the public interest notion has been pursued while network growth and development in telecommunications has been highly uneven. This is perhaps unavoidable at the initial stage. However, as the market logic takes hold and the momentum for market liberalization builds up, public service and the policy objective of ‘village to village’ has been either ignored by the commercial media or come under explicit attack by telecommunications strategists representing the interest of domestic and international capital. The MPT/MII/China Telecom group, on the defensive in the anti-monopoly offensive and without a well-established and well-defined public interest record to defend, has not been able to explain what public interest obligations it had fulfilled in the past. Nor has China Telecom positioned itself as a champion of the public interest in the debate.

The arguments of a highly influential telecommunications policy report, published in 1998 by a group of telecommunications industry lobbyists, financial consultants, and economists, with financial support from Goldman Sachs (an underwriter of China Telecom’s Hong Kong subsidiary’s stock offerings) is a case in point. The report, written by a team led by Wang Xiaoqiang, a financial consultant for China International Financial Corp, is widely believed to reflect the interests of China Telecom and its financial backers. It explicitly argued that in light of the upcoming entrance of foreign companies into the Chinese telecommunications service market, China’s telecommunications sector should abandon whatever public service mentality it has and replace its public service rationality with a market rationality. It advised China Telecom to abandon the objective of pursuing increased telephone penetration rate in the rural and economically underdeveloped areas and instead focus on the affluent consumers in the cities and rich coastal regions.89 In this report, the commercial interest of China’s telecommunications industry is presented as the national interest. The prospects of foreign telecommunications companies in the take over of profitable telecommunications markets are taken for granted. This becomes the precondition for determining domestic telecommunications policies and priorities. Within this context, the report argues for the industrial convergence of telecommunication and cable, essentially to allow China Telecom to tap into the cable television market and to make it stronger to compete with foreign companies.

Another widely circulated argument, advanced by Beijing University economist Zhou Qiren, completely applied the market logic to telecommunications and cable industries. Zhou, who presents himself as an independent ‘third eye’ on the telecommunications versus broadcasting debate, argued for full-scale technological and market convergence and wholesale domestic and international competition in telecommunications, cable television, data transmission, and internet services. While Wang and his colleagues were aware of the tensions between market logic and the imperative of wiring all the villages, Zhou is completely ignorant of the bias of market logic and potential market failures. Nor is he entertaining any public interest obligations in communications. An undifferentiated, undefined ‘Chinese Consumer’ is his unit of analysis, and as one of the subtitles in his article claims, “The market knows no unsolvable problems.”90 Zhou’s argument is widely circulated in the media for its simplicity, its unreserved embrace of the market, and its attack on monopolies. His

89. Wang Xiaoqiang, op cit, Ref 19, p 22.
argument has a lot of appeal to the urban middle class. As discussed previously, the old paradigm, which equated the MTP’s interest with the interest of the state and the people, has lost credibility and is beyond repair. The ‘consumer interest’ – inevitably that of the large government and business users and the vocal urban middle class – has become the new point of reference.

It is in this context that the SARFT’s articulation of the public interest notion in the debate is significant. To the SARFT, the public interest character of cable television not only implies equitable access, but also the non-commercial nature of the network. Compared with telecommunications, the universal service ethos is stronger in broadcasting and cable – although it has always been conflated with the party’s mouthpiece principle. As the argument goes, for the party’s voice to reach every corner of the country and for the masses to be enlightened and entertained, broadcasting needs to be freely available to the whole population. Cable television, as discussed earlier, has a strong universal service orientation as a result of its origins in welfare-oriented state enterprises. What is significant, however, is the SARFT’s articulation of the universal service and non-commercial notion in separation from the mouthpiece principle and its insistence that the information superhighway be accessible to all. In his presentation to the State Council’s Conference on Informatization in April 1997, Sun Jiazheng, then Minister of Radio, Film, and Television, explicitly listed the ‘public interest character’ as the second most important socialist characteristic of the broadcasting and cable network (after its population reach). Sun’s point has been further elaborated in a series of SARFT-generated newspaper articles aimed at influencing the debate in early 1999. One article stated:

While telephone fees are extremely high in China, cable bills are extremely low. Some of China Telecom’s charges are 6 to 7 times higher than those in the US. China’s cable television fees, however, are merely 1/30 of the US average … reform in cable television must take this special situation into consideration. While cable operations must be turned into a business, its public service character should remain… and ever further enhanced…

In an information society, the public’s right to access information is a basic human right.92

The article proposed to divide cable channels into different categories and to be managed accordingly:

- cheaper and basic services to be run on a public interest principle;
- value-added services to be run on a commercial principle; and
- free channels for the distribution of educational, scientific and technical information.

The SARFT, in short, has emphasized the political, cultural, and public service character of cable television and argued for ‘adequate consideration of the special character of cable television in designing the new institutional framework for information industries.’ The expected opening up of the telecommunications sector to foreign competition also prompted the SARFT to argue for the necessity of keeping the cable sector apart from telecommunications operations – as the government prohibits foreign involvement in the mass media.

92. ‘Turning cable television into a business does not mean a dramatic price increase’, Economic Daily, 11 February 1999, p B1, emphasis added.
The SARFT thus pursues pro-convergence and anti-convergence, market-oriented reform, and the maintenance of public interest, all at the same time. It uses its special ‘mouthpiece character’ to prevent the entry of China Telecom into cable operations, while positing to use the cable network to provide internet, VOD, and other value-added services. It champions the anti-monopoly argument in telecommunications and defends its own monopoly in broadcasting and cable. While China Telecom launched the ‘Government on the Net’ campaign in 1999 to cultivate the government user market, the SARFT, to demonstrate its commitment to universal service, stepped up its ‘village to village’ campaign in 1998 to ensure reception of broadcasting signals in every village by the year 2000. But while it is far ahead of the MII/China Telecom group in providing universal service, can it challenge the MII and have the cake of convergence and market competition and eat it too?

The struggle is intense and the outcome is still unclear. The SARFT’s all-out technological upgrading and full-scale interconnection of the national cable network was in full swing in summer 1999. In September 1999, the SARFT’s Fang Hongyi indicated that the SARFT was pursuing its plan to provide ‘fast and cheap’ internet access in three to five years, while conceding that the plan would require billions of dollars and approval from the MII.94 Then, on 10 November, 1999, just as China began the final WTO negotiations with the US, the State Council issued a new MII–SARFT joint circular that reflects MII/China Telecom positions. While maintaining an anti-convergence stand, it re-emphasized the need to avoid ‘duplicate construction,’ banned ‘in principle’ the further construction of optic-fibre trunk lines above the county level, and reaffirmed the MII’s planning authority over the cable network. Responding to broadcasters’ argument that it makes more business sense to build a backbone network than to lease one, the document called for a substantial reduction of telecommunications network leasing fees.95 It is possible that the new circular was the result of the State Council’s concession to the MII and the telecommunications sector.96 That is, in exchange for opening up the telecommunications sector to international competition, the state would secure the MII’s authority over cable network planning and protect China Telecom by forcing the broadcasting and cable sector to rent its backbone and preventing the cable system from becoming a full-blown network competitor.97

Although the SARFT’s prospects for controlling an independent backbone network does not seem to be good, its broadband initiative has been taken up by the state and it has been rewarded with a stake in China Network Communications Corp. (China Netcom), the country’s third state-owned telecommunications carrier established in April 1999. With investments from four government partners – the Chinese Academy of Sciences, the SARFT, the Ministry of Railway, and the Shanghai Government, the first phase of this 300 million yuan ($36 billion) new corporation is to build and operate a high-speed broadband backbone network on the basis of existing cable and railway
fibre-optic capacities and IP technology in 15 cities in East and South China. Hailed as the second China Unicom, China Netcom will have both the policy mandate and the technological capabilities to provide truly converged communication services – telephone, cable, and high-speed internet access. Instead of directly serving ordinary citizens, however, the planned 20Gbps IP/DWDM (dense wavelength division multiplexing) backbone network will focus on meeting the needs of Chinese businesses, offering them bandwidth, services, and VPNs (virtual private networks).98

The state-of-the-art China Telecom public network has suddenly become a ‘telecom dinosaur’. Its technological leapfrogging, while managing to jump into the age of digital switched phones, did not catch up with broadband and IP technologies. Foreign capital pressed for investment opportunities. Under these circumstances, massive state investments in a more advanced broadband network have become a new imperative: to exploit new technologies and to conquer the domestic market before foreign capital arrives. The sense of urgency was best expressed by Edward Tian, China Netcom President and CEO: ‘Our company was created in less than a week and we will build one of the world’s largest broadband infrastructures over the next six months.’99

Such is capitalist logic of ‘creative destruction,’ or the imperative of development and the eternal game of ‘catch-up with the West’ under ‘socialism with Chinese characteristics’.

The Chinese state is thus riding the information highway bandwagon at an accelerated rate and pursuing anti-and pro-convergence policies at the same time – preventing existing telecommunications and cable operators from entering into each other’s territory, while creating a new corporation to promote technological and market convergence. It is still too early to see whether the new MII/SARFT circular and China Netcom will end the war between the country’s telecommunications and cable authorities. However, China Netcom, like China Unicom, will further perpetuate the elite and urban biases of telecommunications development in China.

Conclusions

The institutional and technological structure of China’s emerging ‘information superhighway’ is taking shape rapidly. More players and larger domestic and foreign alliances are joining the ‘golden rush’ in China.100 Telecommunications development in China is at a crossroad – not as to which state or international corporation and their alliances will prevail in the next round of ‘enclosure’ in the electronic age, but in the more fundamental sense of the basic purpose and organizational principle of communications. That is, an information superhighway for what, for whom, and at what cost? If the country’s broadcasting and cable system remains a government monopoly, what fundamental difference will a 500-channel universe make to the character of public communication in China? When the state is profoundly undemocratic, what can ‘government on the net’ do to improve democratic decision making? Who will have the financial and cultural capital to travel on the information superhighway? Will telecommunication

99. Ibid.
100. While Chinese telephone and cable authorities were battling with each other, Bill Gates, in alliance with more than 30 Chinese businesses, including China Telecom, launched the Venus Project in early 1999. The project aims to bypass broadcasting and cable authorities and provide internet access through dumb-down computers and web-TV software. Zhi Xin, ‘Microsoft’s Venus computers debuted at Shenzhen’ high-tech trade fair,’ The China Press, 14 November 1999, p A11.
services in China evolve from being a political privilege to a social privilege? Finally, at whose expense will the information superhighway operate?

Although the SARFT’s articulation of the public interest notion and its publicly stated objective of balancing public communication needs with the commercial imperative is noteworthy and one telecommunications policy analyst has even advocated a non-profit public service communications enterprise model, there are no institutional mechanisms to ensure an adequate hearing of these ideas in policy making. The issue of ideological and cultural diversity in the mass media sector is still beyond legitimate public discourse. Other than middle class consumers who have challenged China Telecom’s monopoly and endorsed more market competition, there are no organized public interest groups to actively intervene in the telecommunication policy process, including the drafting of the telecommunications bill. The monthly cable television fee, currently under a SARFT cap of 12 yuan ($1.4) per month, has already become a burden for some rural households. In one Southern village I visited in August 1999, the 5 yuan-per-month initial cable fee had quickly reached the 12 yuan cap in a few years, and nearly 10% of the cable households have dropped out from cable television. This is not an encouraging sign, at a time when the majority of the Chinese households are not yet wired with basic cable and telephone. And it would take a huge leap of faith to believe that the majority of Chinese will have the resources to leapfrog into a wireless digital being in the near future.

Just as the current debate over telecommunications reform is very much limited to the elite, the entire informatization initiative is elite-driven and incompatible with democratic principles. The elite and special interest driven nature of China’s information and telecommunications policy is perhaps best expressed by Liu Ji, Vice-President of the Chinese Academy of Social Sciences. As a top adviser to President Jiang Zemin and arguably China’s most powerful establishment intellectual, Liu saw the relationship between ‘socialist democracy’ and the ‘information superhighway’ in the following way:

*The goal of political system reform is clearly to build socialist, democratic politics... But how do we reach this goal? We have to start from China’s reality. For example, we now have about 200 million illiterates.... Do you give such a person the right to vote? Of course you should. But is his vote worth as much as the vote of a PhD who has returned from America? Or of a university professor? Or of a government official? They are not equal. Someone who is illiterate does not have the ability to choose... If we gave everybody a vote, when their votes are of different value, then a lot of good resolutions put forward by intellectuals would never pass, because intellectuals are in a minority... To build an information superhighway costs a lot of...*
money. Intellectuals would immediately pass such a resolution unanimously. But the attitude of the 200 million illiterates would be: ‘What is an information superhighway? What has it got to do with me? My first demand is hurry up and give me food to eat. And then let me study at the primary-school level.’ As for the vote, he’d be likely to vote against the information superhighway, and want to solve poverty first.102

Liu used the term ‘intellectuals’ liberally for ‘the educated elite’ and he apparently confused universal suffrage with direct referenda on particular issues. Still, Liu’s thinking is typical of the elite mentality and the social bias of the Chinese reform program. Moreover, in contrast to those who believe in the magic of information-led development and the virtue of using the information superhighway to deliver the best classroom instructions in Beijing to remote areas, Liu’s remark is frank. To invest in the information superhighway and to deliver basic education to the 200 million illiterates are different policy priorities. Massive build-up in telecommunications has been in sharp contrast with severe under-investment in primary education and a steady decline of the state’s education budget as percentage of GDP from 1991–1996. The enfranchisement of several million Chinese netizens has gone hand in hand with the dropout of school children in poor areas – in the Ningxia Autonomous Region, 25% of students drop out after one year and less than 50% finish sixth grade.103 While rich Beijing kids play computer games in expensive internet cafes, school-age girls from poor provinces sell flowers on Beijing streets, often to support their brother’s tuition. The failure to meet the ‘village to village’ telephone target for year 2000 does not look so bad compared with the failure to meet the compulsory education goal by year 2000. The WTO deal and the entry of foreign capital into the telecommunications sector will undoubtedly intensify the tensions between the basic needs of the majority of the Chinese population and the special needs of the elite.