

Telecommunications

Wired Telephony

Until the 1990s, the development of telecommunications in Hungary had fallen behind the level of development witnessed elsewhere in the national economy, and failed to meet public demand. Even in the year of the regime change (1989), the total number of telephone subscribers was below 1,000,000 persons (88 phones per 1,000 inhabitants), a mere 18% of local main exchanges were automated and only 540 settlements were connected into the automated long-distance dialling network. These statistics were symptomatic of a system lagging far behind the contemporary European average. For decades the only operator of the national wired public telephone network was the Hungarian Post Office, in a monopoly status that was maintained until 1989.

Parallel with the developments in Hungarian politics during the time of regime change, a new era was dawning in Hungarian telephony. With the establishment of *MATÁV* Hungarian Telecommunications Company Ltd. – as one of the successors of the former state-owned Hungarian Post Office, which was split into three subsidiaries in 1989 – a massive program of network development was launched in 1990. The majority of the financial resources (more than USD 400 million), was derived from the privatisation of *MATÁV*, following the new Telecommunications Act of 1993 that opened the legal route to acquire national concession rights; Deutsche Telekom and Ameritech International became *MATÁV* shareholders. These two companies had captured 30% ownership of the national concession that had been mandatorily transferred to *MATÁV* at the end of 1993.

In February 1994, following the announcement of the regional concession tender results, 12 local telephone operators (LTOs) were established (e.g. Déltáv, Emitel, PanTel, Monortel, Jásztel and Hungarotel). *MATÁV*'s coverage area included about 70% of the territory of Hungary and 72% of the population, including 36 primary districts where local telephone services

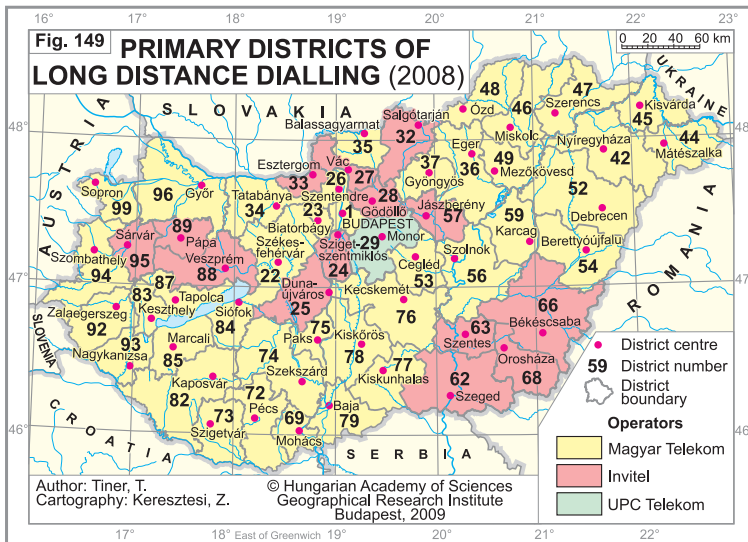
were provided by the company (the remaining 15 districts being distributed among the 12 new LTOs). In 1995 the *MATÁV* shareholding of the two investors increased to 67% (USD 852 million). On the basis of the combined value of the two share tender offers, *MATÁV*'s privatisation was one of the largest transactions of its kind in the Central and East European region and represented the largest foreign direct investment (FDI) in Hungary.

As a result of these investments, the length of fibre-optic networks of *MATÁV* and the LTOs was enlarged by more than 10,000 km, the capacity of digital exchanges increased 260-fold, and the number of residential lines grew by 380% during 10 years.

In 2000 Deutsche Telekom acquired majority ownership (nearly 60%) of *MATÁV*. The following year the Hungarian company became an international telecommunications group, when a consortium led by *MATÁV* acquired a majority stake in Macedonia's national telecommunications company Makedonski Telekomunikacii (MakTel), hence MakTel became a consolidated subsidiary of the Group. Then in July 2001, Emitel became a fully-owned, consolidated *MATÁV* subsidiary that provided residential and business telecommunications services in the Southern Alföld region.

2001 was the year when the Hungarian telecommunications market was fully liberalised. The field of fixed-line telephony was the last segment of telecommunications where the market was opened. The group's companies achieved leading positions in mobile telephony, internet and business data communication markets and obtained over 80% market share of the fixed-line telephone market.

In December 2003 *MATÁV* announced the connection of the 100,000th ADSL line. In the same year the number of towns where this service was available tripled to reach 128. Since 1 January 2004 – when the Electronic Communications Act entered into force, that



In December 2004 MATÁV acquired a 73% majority stake in Telekom Montenegro, and has become a strategic investor in the South-East European region. In May 2005 the MATÁV Group was renamed *Magyar Telekom Group*, consisting of T-Com, T-Online, T-Mobile, T-Systems and T-Kábel subsidiaries, jointly offering a full palette of telecommunications services for residential and business customers.

In 2007 several LTOs (e.g. Hungarotel, Pantel, V-holding, Euroweb, etc.) merged to form the Invitel Telecommunications Company, the second largest service provider in the fixed-line telecommunications market. Since then, Magyar Telekom has been in sharp and permanent competition with Invitel. The concessionary service area of the latter comprises 14 primary districts of the country, covering nearly 17% of Hungary's population.

In 2008 Magyar Telekom became the principal provider of telecommunication services in Hungary and operated local telephone services and long distance dialling in 38 primary districts (Figure 149). Its latest technical innovations have seen it install, in 2009, a 2,700 km-long optical NG-WDM (Next Generation Wavelength Division Multiplexing) backbone network. Magyar Telekom now offers its customers super-fast wired broadband access, which is much faster than ever before. The relative commercial values of supplying fixed-line telephony to households and the volume of initiated calls are steadily diminishing since 2000, owing to the rapid

Table 39. Relevant telecommunications data (1990–2008)

Year	Number for			
	Wired telephone lines, 1,000	Calls initiated from wired network, million	Mobile phone subscribers, 1,000	Calls initiated from mobile network, million
1990	996	1,301
1991	1,129	1,456	5	3
1995	2,157	2,922	267	294
2000	3,801	4,191	3,076	2,258
2005	3,453	2,999	9,320	5,995
2008	3,103	1,981	12,224	7,778

.. no data

Source: Hungarian Central Statistical Office (www.ksh.hu)

Table 40. Telecommunications data for Central and South-East Europe (2008)

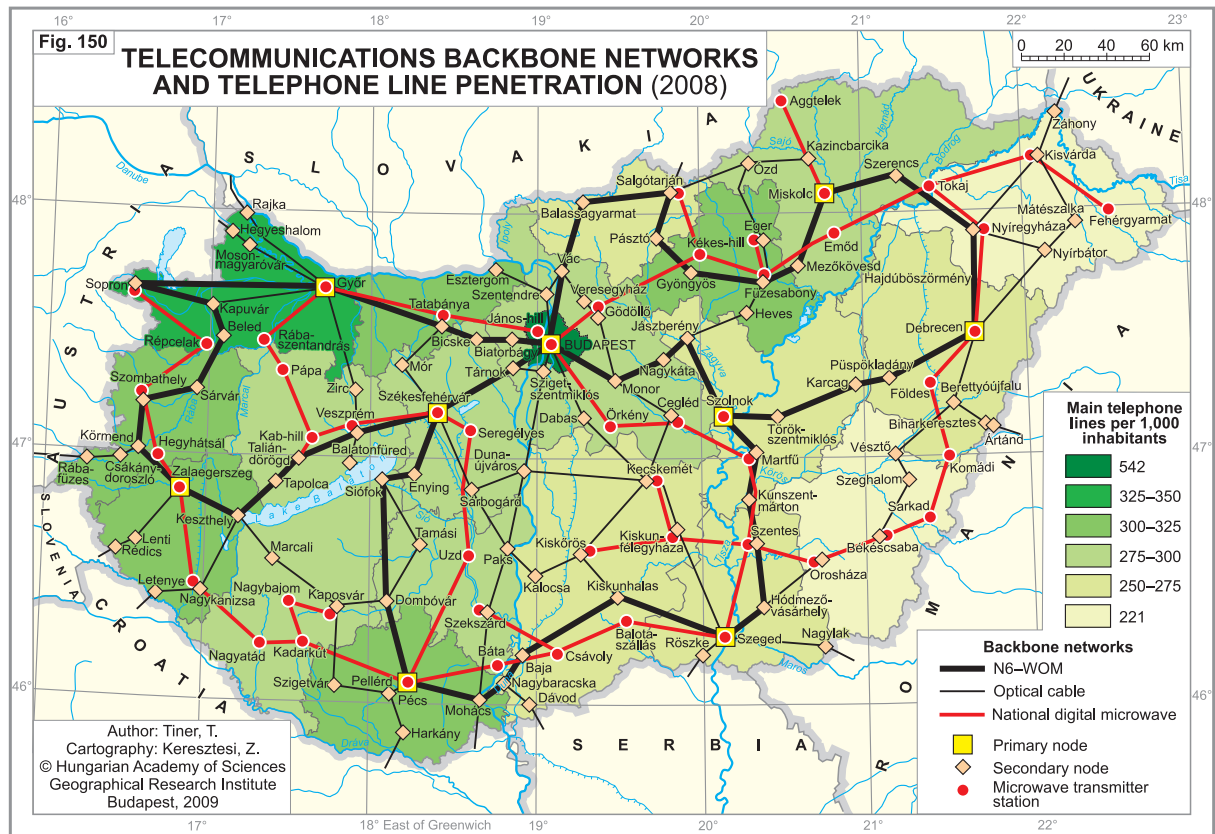
Country	Number of			Broadband penetration rate, %
	Wired telephone lines	Mobile telephone subscribers	Internet users	
	per 1,000 inhabitants			
Austria	408	1,186	671	19.2
Bulgaria	301	1,296	311	7.6
Croatia	405	1,105	436	..
Czech Republic	236	1,249	488	14.6
Hungary	324	1,101	524	14.2
Poland	271	1,087	442	8.4
Romania	199	1,067	241	9.7
Slovakia	214	1,126	559	8.8
Slovenia	428	964	530	9.1
EU 27 (average)	476	1,155	574	20.1

.. no data

Source: Hungarian Central Statistical Office (www.ksh.hu)

contained EU-compatible market regulatory provisions – fixed-line number portability became a reality in Hungary.

spread of mobiles all over the country (Table 39). Meanwhile considerable regional differences exist in this field of telephony (Figure 150).



By the end 2013, Magyar Telekom plans to offer approximately 780,000 households a fibre-to-the-home (FTTH) network, and to further upgrade 380,000 households to whom a hybrid-fibre-coaxial network is currently available.

When comparing the main telecommunication parameters of Hungary with the same values of other Central and South-East European countries, considerable differences can be observed that of EU 27 average (Table 40).

Mobile Telephony

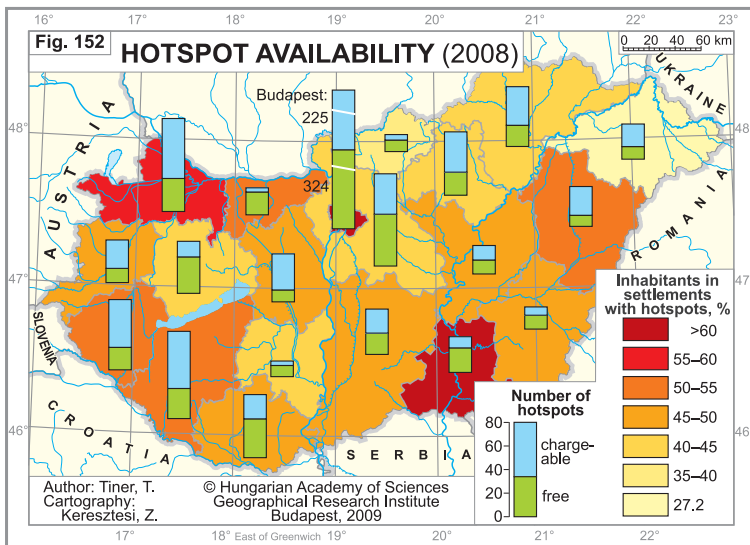
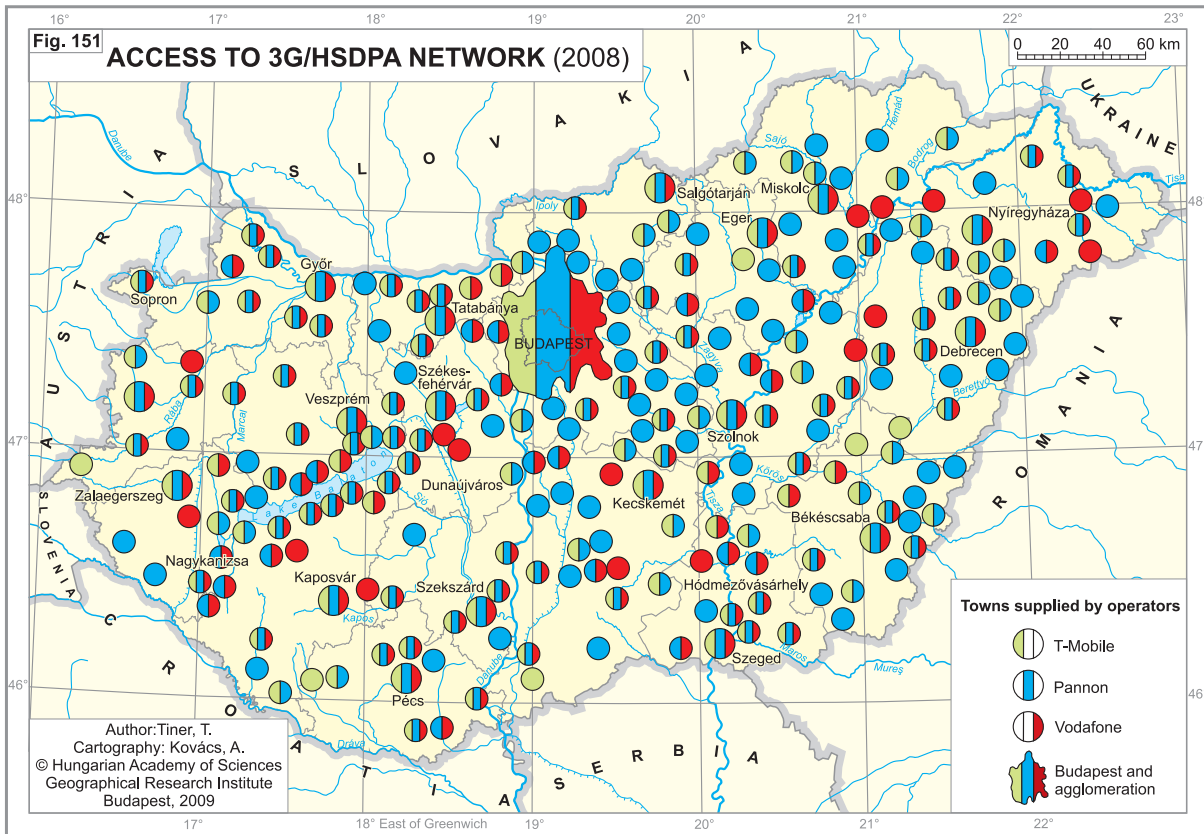
In Hungary there are three mobile telephony providers: *T-Mobile Hungary* (before May 2004 it was called *Westel*), *Pannon GSM* and *Vodafone*. They first started operating in the mid-90s, soon becoming very successful and have divided-up the Hungarian mobile market between themselves. T-Mobile is the largest GSM mobile network provider in the country.

Deregulation of the economy in the 1990s led to an explosive and enduring growth in the mobile communications market in Hungary. This process has resulted in there being over 12 million mobile phone subscribers nationwide (120 subscribers per 100 inhabitants) by the end of 2008. T-Mobile is the leading mobile opera-

tor in the country, providing services to over 5.5 million users (44.7% of total subscribers). Pannon GSM has 4 million subscribers (33.4%) and Vodafone has nearly 2.6 million (21.9%).

Since the second half of the 1990s, mobile operators have competed with MATÁV's services. Their efforts have proven to be successful: from 2000 onwards the number of fixed phones in dwellings started to fall, whilst in 2002 the numbers of mobile phones, and the number of domestic calls initiated by mobile phones, surpassed similar indicators relating to fixed-line phones in Hungary.

After the turn of the millennium, another arena of competition opened, with a focus on



broadband network development. The latest outcome is the developing coverage network of 3G/HSDPA (High Speed Downlink Packet Access) from each of the operators.

By the end of 2008, nearly 300 settlements had access to 3G networks (Figure 151), but the

penetration rate (14.8% in January 2008) is far from the EU-27 average (20.0 %).

The number of *WI-FI* (Wireless Fidelity) *internet 'hotspots'*, promoting the use of mobile internet, has increased spectacularly.

In 2008 more than 1300 registered hotspots are available for potential users all over the country; 41% of them are located in Budapest.

Looking at the map in this side, it can be seen, that the majority of hotspots can be found in publicly accessible locations (hotels, restaurants, pubs, cafés, telecottages, etc.)

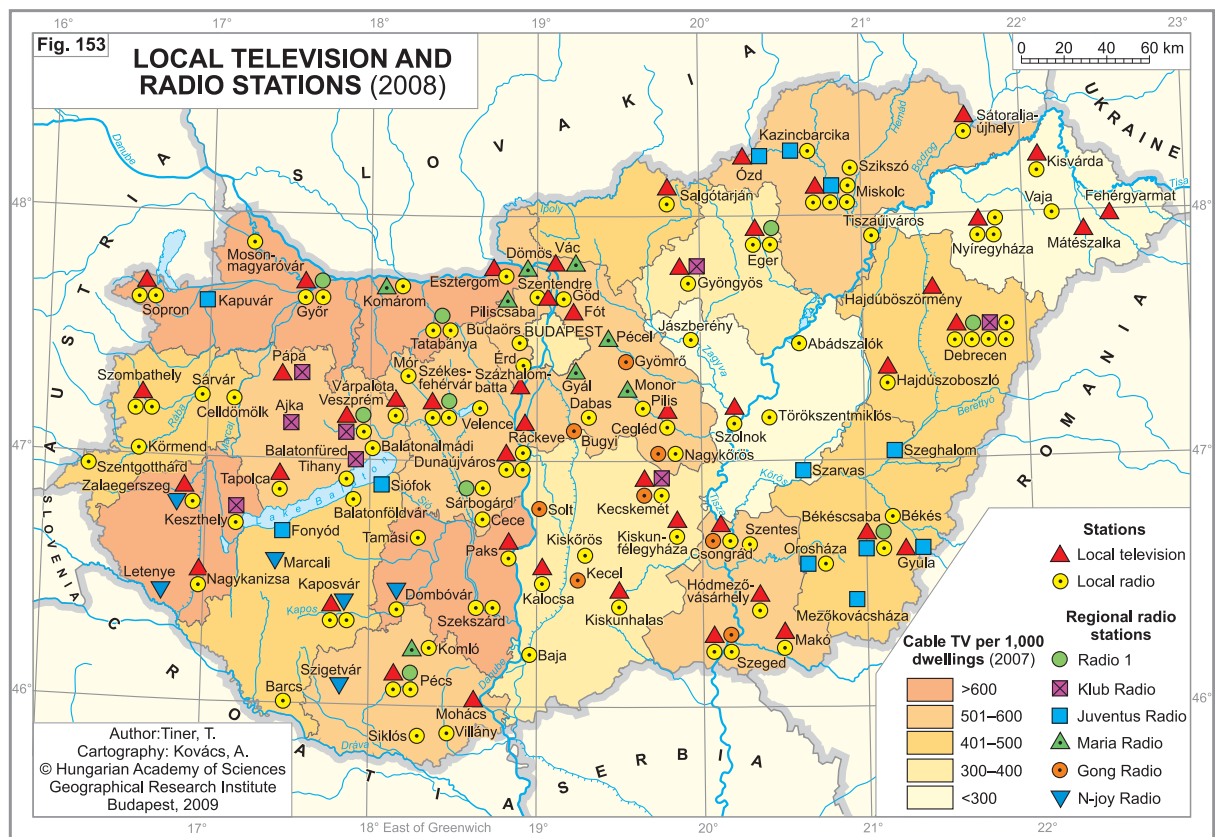
or in the vicinity of mobile phone towers with aerials. 51% of all hotspots can be used free in Budapest, the rest are chargeable. In towns outside of the capital, the proportion of chargeable hotspots is 56% (Figure 152).

Television, Radio Broadcasting and Programming

Before the regime change, broadcasting was the responsibility of the Hungarian Post Office. The transmission network broadcast 3 nationwide, and 5 regional stations of Hungarian Radio, with the help of 63 amplifiers and other special equipment. Programs were broadcast abroad in Hungarian and foreign languages too for shorter intervals, on the short wave band. At that time, Hungarian Television broadcast only two channels nationwide, and few regional and national programs with the help of amplifiers.

During the 1990s, following the liberalisation of Hungarian media, several nationwide

commercial television channels – besides many regional and local television and radio stations – started to broadcast over the airwaves. In addition to *nationwide radio stations* (Kossuth, Petőfi and Bartók), and *television channels* (M1, M2 and Duna TV) which are received by over 95% of the country in a fair quality, 42 local television channels offer daily programming and nearly 90 local radio stations were broadcasting in 2008 (Figure 153.) Dozens of both Hungarian and foreign television channels are available for subscribers via satellite or cable, and for 12% of them in digital reception quality.



Cable Television

In Hungary more than 2.1 million dwellings are connected to the cable television network, in 312 settlements. This type of service is available

mostly in Transdanubia and Pest County. Several operators are active in this field (UPC, Fibernet, Diginet, etc.) and offer different packages of pro-

grams. *UPC Hungary Ltd.*, the largest operator, was established in July 1998 by the merger of two market leading groups, Kábelkom and Kábeltel.

At that time Kábelkom was providing cable television services in 10 larger towns outside Budapest and their surroundings (Székesfehérvár, Tatabánya, Veszprém, Pécs, Dunaújváros, Eger, Szolnok, Miskolc, Debrecen and Nyíregyháza), whilst Kábeltel was providing similar services in 6 towns (Sopron, Szombathely, Nagykanizsa, Mór, Mezőtúr and

Budaörs), as well as in Budapest. The merged company was 80% owned by UPC Hungary, which has become the sole owner of one of Hungary's biggest providers of broadband internet services.

In 1999 the owner of UPC gained majority ownership in the Monor Telephone Company (Monortel) acquiring the concessionary right to provide local telecommunications services in the south-eastern part of Pest County, encompassing 43 settlements.