

PRESS RELEASE

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25 years of mobile communications in Hungary

Commercial mobile service started in Hungary 25 years ago, on October 15, 1990, i.e. mobile telephony has reached a quarter of a century's anniversary in Hungary, being the first with this in the Central-East and South-East European region. And exactly 25 years later, nowadays, cutting edge mobile services and devices are available for Hungarian users through the most advanced 4G mobile Internet network with a nearly complete nationwide residential coverage.

In the 25 years mobile customers of Telekom conducted at least 90 billion minutes, i.e. 1.5 billion hours of outgoing calls, which would add up to 171 thousand years, and they have sent nearly 10 billion text messages.

Christopher Mattheisen, Magyar Telekom's Chief Executive Officer commented, „Mobile communications has developed in Hungary at a speed unseen before, from the 25-year old analog voice service to the present marked by 4G, when mobile Internet, online connections and multimedia content prevail in communications, and Hungary's mobile network infrastructure ranks among the best in Europe. The fast pace of development is not likely to slow down in the next 25 years either, as in the emerging digital economy the next generations of mobile technology will be defined by the integration of telecommunication, IT, media and entertainment markets as well as fixed line and mobile networks, in addition to Big Data, M2M and IoT. We thank our customers for their loyalty and trust enjoyed throughout the past 25 years and we shall do our best to have this honor in the future too.”

The launch of mobile services marked the beginning of a new era: the catching up of Hungary's telecommunications industry with Europe's and the world's developed economies. Hungary's first mobile network base stations and switches were put to operation in the 154 meters high Száva telecommunications tower built in 1988, Budapest's third tallest building until today, by Westel Rádiótelefon (later Westel 0660) Kft, a Magyar Telekom Group subsidiary.

Customers of the 450 MHz (1G) system operated until 2003 later quickly found their way to service providers offering higher quality products and devices and launching digital 2G then broadband 3G mobile networks. A good indication of the transformation of user habits, popularity of favorably priced tariff packages and growing trust of customers is that the ratio of pre-paid mobile customers decreased below 25% at Telekom whereas the same indicator was over 70% a decade ago, in 2005.

The success and nationwide penetration of mobile services in Hungary is well indicated by the more than 11.5 million mobile subscriptions due to which Hungary's mobile penetration (number of mobile phones per 100 inhabitants) is close to 117 today. As a result of the frequency tender in 2014 today almost the total Hungarian population has access to the benefits of most advanced 4G mobile network, primarily excellent quality and fast Internet connection, when using the appropriate tariff packages and smart devices.

The outdoor residential coverage of Telekom's 4G network is already 95%, which, according to plans, will expand to be practically complete, i.e. 97% by the end of the year. In the last 12 months Telekom has established 1305 new 4G base stations all over the country, and with this the country's first 4G mobile Internet network has become available in more than 2,400 settlements.

The monthly data traffic of Telekom's 4G network has been permanently and steadily increasing since its launch in January 2012 and from July 2015 it has increasingly exceeded the data traffic over 3G. The

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dynamism of 4G's growth is well demonstrated by the fact that in 3 and a half year the number of Telekom's 4G network users has increased to nearly 750 thousand.

Beside permanent growth Telekom's broadband mobile Internet network had the best test results this year in independent international and national measurements and tests. In recent months three independent testings and measurements certified the excellence of Telekom's mobile network. According to measurements of the independent P3 Communications, Telekom's 4G mobile internet network had the best aggregated results among Hungarian mobile service providers also in international terms and received the "Best in Test" certificate for voice and data services. Telekom's 4G mobile Internet network has been ranked first by Ookla Speedtest's user mobile net measurements too, and according to NMHH's own measurement results Telekom's 4G mobile Internet network achieved the highest upload and download speeds as well as the shortest ping time.

The path to the future may be the integration of telecommunications, IT, media and the entertainment markets, as well as that of wire line and mobile networks, all of them implemented in a digital world where online connections are determinant. Primarily these services and the integrated solutions available online may bring growth for players of the telecommunication market. And the driver of growth may probably be the expansion of mobile data usage, to be generated primarily by video and shared user content. Last year global mobile usage grew by 60 per cent and this dynamic is not likely to decline. Apart from traditional devices an increasing number of things will join the mobile network, for example cars, energy meters or medical and wearable devices. With the fast paced expansion of smart devices and 4G media consumption as well as sharing experiences will increasingly shift to mobile devices and shopping is also moving towards online. Solutions have appeared on the horizon already, like, for example, self driving vehicles, which will require the capacity of 4G or even 5G networks in the design phase as yet. The same will require data connections that are reliable in all circumstances, i.e. there will be a greater need than ever before for the mobile internet.

The expansion of new technologies and info-communication solutions, and their intensive use will contribute to the improvement of people's quality of life, the efficiency of changes and, ultimately, the competitiveness of Hungarian economy. The number of connected devices is also steadily increasing, whereby the possibility of introducing new services is moving into the foreground. This is the reason why in addition to the excellent quality services and positive network experience the widespread dissemination of literacy and safer internet use assume increasingly great importance.

Telekom intends, as it did in the past 25 years, to remain the frontrunner in the implementation of new mobile technologies in Hungary in the future as well. LTE Advanced which represents the next phase has been available at Telekom over a test network since 2014. The launch of the next generation (5G) commercial networks can be expected by 2020 in Europe.

An excellent network infrastructure is also indispensable for the implementation of Digital Hungary's vision, to which Magyar Telekom contributes as well with its intensive network development and digital education program.

Major milestones of Telekom's mobile services in the past 25 years:

1994: The introduction of digital, 900 MHz, second generation (2G) GSM mobile service marked the beginning of Hungary's mobile market competition; Westel 900 (later Westen, then T-Mobile Hungary) covered the whole country with its 2G network; smaller, pocket-sized mobile devices introduced to market

1995: First text message in Hungary sent over Westel 900 network

2000: Westel 900 customer number exceeded 1 million



2001: Westel launched the GPRS packet switched data transmission service which enabled the emergence of mobile Internet and multimedia applications

2002: Number of mobile subscribers exceeded the number of fixed lines at Telekom Group; Telekom was the world's first service provider to introduce multimedia messaging (MMS) for sending text, image, voice and video

2003: The 450 MHz (0660) analog mobile service was terminated and its customers were migrated to GSM

2004: T-Mobile Hungary launched its mobile payment and wireless Internet (Wi-fi) service

2005: T-Mobile Hungary launched its third generation (3G) UMTS mobile network that enabled multimedia applications, video calls, mobile television and fast mobile Internet

2006: T-Mobile launched over high-speed packet switched downloading (HSDPA) also called mobile broadband its 3G mobile network, which prompted a fast increase in the number of mobile Internet subscribers

2008: Uniquely in the country Magyar Telekom offered „triple-play” (TV, Internet and telephone) packages on both fixed line and mobile network and was the first to offer smartphones

2009: As first in Hungary, Telekom tested the next generation 4G/LTE technology

2012: Telekom introduced its commercial 4G service, the first in the local market

2014: Telekom's LTE-Advanced test network introduced to Hungary the next phase in mobile technology; Telekom's countrywide residential 4G coverage exceeded 78%

2015: Telekom's residential 4G coverage will be close to complete, 97% by the end of the year; Telekom's 4G mobile Internet network had the best results in independent international and national tests and measurements.