Starting with the first post office in 1854, the first military telegraph office in 1861 and the establishment of a public telegraph service from 1895 (KTAM Report 1953: 495, Hla Tun Aung 2003: 552), the telegraph system had expanded to almost 50,000 km of wire by the Second World War, with 656 stations, 331 of them owned by the railway administration (Storz 1967: 166). The first telephones were installed in 1888; from 1904, wireless radio broadcasters were producing news bulletins for shipping and aviation. The first Burma broadcasting station was set up in 1937, telex was introduced in 1971 and telefax followed in 1987 (KTAM Report 1953: 495, Hla Tun Aung 2003: 556).

Reconstruction of the postal and telegraph network, which was badly damaged during the war, commenced in the 1950s, initially with an emphasis on the more secure airmail system and wireless telephony, which offered greater reliability during the campaign against insurgents. Wireless lines and landline facilities were then progressively improved during the 1960s. The international telephone and telegraph service, which before the war relied on a connection via Madras, became more international in focus after 1960 with connections via other Asian cities.

From the 1990s, the mobile services began to evolve: ‘MPT’ launched a variety of cellular systems in the major urban areas, such as Advanced Mobile Phone Service (AMPS), Digital Advanced Mobile Phone Service (D-AMPS), International Direct Dialling Service, Wireless in the Local Loop (WLL) automatic radio telephone systems (TDMA), Digital European Cordless Telecommunications (DECT) radio telephone system and CDMA ... MPT launched GSM in Yangon and Mandalay in 2002, and W-CDMA in 2008’ (Thaw Tar Min/Fife/Bohlin 2014: 5/6).

MODERNISATION

As part of the liberalisation from 2010, the telecommunications sector was restructured. Nonetheless, until 2014, Myanmar Post and Telecommunication (MPT) was the only nationwide provider of mobile services, mainly serving Yangon, Mandalay and Nay Pyi Taw. With the subsequent award of nationwide licences, first to two local providers (MPT and Yatanarpon Teleport YPT) and then to two foreign operators (Telenor und Ooredoo), the number of mobile phone and internet users has rapidly increased.

Due to restrictive controls and the impossibility of expanding the telecommunications sector for many years, Myanmar has been dubbed a ‘telecommunications greenfield’ or the ‘last frontier’ in the global context (Goeres/White/Tun 2013, Fife 2014). The few studies which exist describe the major expansion potential in detail (Ericsson 2012, Chhor et al. 2013, Goeres/White/Tun 2013, Fife 2014, Thaw Tar Min/Fife/Bohlin 2014).

In 2014, Myanmar was reported to have 0.98 telephone lines per 100 population and 54.04 cellular subscriptions per 100 population. The number of internet users was reported as 2.1 per 100 population (all figures: ADB 2016; also see Johnsson 2014). The official statistics for 2014/15 (MNPED 2015: 441) refer to 18,405,814 telephones nationwide, including 5,844,375 in Yangon. The number of MPT mobile phones rose from 13,480 (2000/01) to 1,637,629 (2011/12) and then 17,839,244 (including 5,590,071 in Yangon), with Telenor accounting for a further 6,400,000 and Ooredoo 3,329,000 (figures for 2014/15; MNEPD 2015: 441).

The greatly improved provision is concentrated on the urban areas, with rural regions still underserved. The highest number and density
of the MPT towers are found in urban areas and along the country’s main transport routes; provision is much poorer in the rural, mountain and peripheral regions. This is reflected in the low level of household mobile phone ownership, but it is also noticeable that the number of households with mobile phones in border regions (especially to China and Thailand) is very high along stretches with higher population densities. As regards the distribution of the towers owned by private providers (Telenor and Ooredoo), it is noticeable that preference was given first to urban and densely populated areas.

MOBILE COMMUNICATION

The use of mobile communications shows Myanmar-specific traits:

- The main user group is the young and educated population, particularly the 18-34 age group and university graduates (Thaw Tar Min/Fife/Bohlin 2014: 15).

- Many users share a mobile phone with family members and friends, largely on account of the high purchase costs of handsets and expensive phone tariffs.

- The main motive for having a mobile phone is for use in emergencies (96%), convenience (95%), communication (94%), time-saving (92%) and direct access to information (90%) (Thaw Tar Min/Fife/Bohlin 2014: 11).

- The predominant forms of use are voice calling (83%), texting (52%) and social networking (43%) (Thaw Tar Min/Fife/Bohlin 2014: 13) – a user preference which reflects and compensates for the difficult and expensive general transport situation in Myanmar.

- When asked about the most important functions and services that should be further expanded, community information is the first preference (40%); almost one third of respondents would like to see the expansion of healthcare services via mobile phone, a further 23% mention job opportunities and 6% want to see a rollout of mobile money transfer services (Thaw Tar Min/Fife/Bohlin 2014: 13).

As regards the further expansion of mobile communications services in particular, the providers are pursuing different strategies: due to the inadequate UMTS infrastructure, 3G is available only to a very limited extent and LTE (1800 MHz) is still in its infancy. In cooperation with France Telecom/Orange, MPT launched international roaming services for GSM and WCDMA in 2014 (Thaw Tar Min/Fife/Bohlin 2014: 5/6). ‘Telenor has intended to implement 2G network in rural areas and both 2G and 3G networks in urban centers. ... Ooredoo has decided to jump directly to 3G networks, providing both 3G and 4G networks in urban areas and 3G in rural areas’ (Thaw Tar Min/Fife/Bohlin 2014: 6).

Frauke Kraas, Aye Aye Myint and Myint Naing

<table>
<thead>
<tr>
<th>YEAR</th>
<th>GOVERNMENT</th>
<th>PUBLIC</th>
<th>MPT SATELLITE</th>
<th>MOBILE</th>
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<td>8,850</td>
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<td>2015-2016</td>
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Internet communication (MoPF 2016: 477)