

## 15. Summary (TBIII: Seite 7–8)

The famous optical-mechanical telegraph line in Prussia was built from 1832 to 1833 and it extended nearly 600 km from Berlin to Coblenz. The entire telegraph line only operated for 16 years until the segment from Berlin to Cologne was closed in 1849 and the segment between Cologne and Coblenz in 1852. This article describes the unique scientific-technical heritage of the 62 stations along the telegraph line, the precise geographic coordinates, station distances and elevations and the local geology at each site. We list their present-day locations in terms of village/town/city, county and state, as well as details of the site preservation and any touristic developments as of 2010.

All station locations have been re-determined by GPS (geographic coordinates with WGS 84 datum, linked to Google Earth). The great majority (50) are known with an uncertainty of less than 10 m, nine up to 30 (50) m and only three for more than 50 m. Our station locations are a major improvement over older coordinates given in Wikipedia (October 2007, most up to December 2011), with deviations from 100 m to as much as 4 km for 70% of the stations. Based on the new coordinates, the telegraph line is 588 km long (469 km straight-line distance from station 1 in Berlin to 61 in Coblenz). The arithmetic mean separation between stations is 9.6 km, the smallest separation being 2.1 km and the largest 16.0 km. The station elevations vary between 34 m und 440 m NN.

A tremendous number of volunteers have contributed to the new precise data, with most of the work done by 2009. The basis for this work was historical Prussian land survey and map documents dating mainly from 1835–1844, HERBARTH (1978), the atlas of PAPEN (1842), and personal information. Those sources are the basis for our map showing with the telegraph line in context with the historical and present political boundaries. The station locations were used to construct a profile along the section Berlin – Coblenz which gives station elevations, details of the landscapes crossed (rivers, lakes, hills, and mountains), and the local geology (stations are on Devonian to Quaternary rocks). Furthermore, the accurate locations of the stations are the basis for future touristic development of the telegraph stations. Addresses are given of six reconstructed buildings, located on new sites but with material, and sometimes plans, from historical stations. The historical documents revealed that living quarters were usually sited on the south side of the stations.

The names of the telegraph stations have been updated where necessary to match with present-day designations on official maps and surveys, and with local addresses and signpostings at the station or in its vicinity. In fact, in the original map of the telegraph line from 1835, five stations were not named according to their actual position at all, but were based on names of nearby villages. The unified and up-to-date station names will enable visitors to find the stations, they will help local residents and administrators to identify with these technical milestones in their communities, and they will aid in efforts to preserve and make them accessible for tourism.

The optical-mechanical telegraph line is a unique cultural-historical band which crosses and thereby links the capital of Berlin with the states of Brandenburg, Saxony-Anhalt, Lower-Saxony, North Rhine-Westphalia, and Rhineland-Palatinate. Since 2005, standardized signs are being installed along the line, including explanatory boards at or near the stations (23 by 2009) and signposts at appropriate locations, particularly roads (24 by 2009). In a few additional locations, there are

individual signposts (2) and explanatory showcases (10). The frequency of signposting varies in different regions along the line. Another source of information is the website [www.optischerTelegraph4.de](http://www.optischerTelegraph4.de) which was launched in November 2007 and includes 24 stations as of 2009. A third activity is establishing a bicycle route along the telegraph line from Berlin to Coblenz, an idea created in 2007. By 2009, 15 of the total 61 stages are included in the above website.