CHAPTER 53

Berlin I: BVG Scenario

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The BVG is Berlin's main public transport company, running virtually all services, with the exception of the S-Bahn urban rail system. This includes bus services, the subway network, the largest tram network in Germany and ferry services. The bus network consists of 149 different lines, 6468 directed stops and a vehicle fleet of 1316 buses (BVG, 2012). In total, about 937 million trips were served by BVG in 2012, 41% of them by bus.

With the opening of the new Berlin and Brandenburg BER international airport, Berlin expects major travel demand changes; importantly, the existing airport Tegel, now exclusively served by BVG-operated buses, will close. BVG thus had substantial interest in a new Berlin area transport model. To deal with these changes, the model not only had to provide a base for future regional transport system planning, but also had to supply detailed information about different user groups' passenger flows. Such user group-specific analyses were very important for BVG in providing a platform for their future business strategies; thus, an agent-based model was specifically requested. Two scenarios were required, one for the year 2008 (actual state), and one for the year 2015 (prediction). To meet the above needs, PTV (2013), Senozon (2013) and VSP (2012) at TU Berlin offered a combined model consisting of both a static macroscopic model built with VISUM, as well as an integrated, activity-based demand and dynamic traffic assignment model, built with MATSim. During the project, efforts were made to base both models on the same data sources and to ensure that both modeling processes interacted with each other to allow data exchange.

The model contains about 115 000 links, about 15 000 directed stops, about 6 million agents, and 539 public transport lines operated by BVG and other Berlin and Brandenburg state companies. Besides motorized individual traffic and public transport, the model also considers biking and walking. For a more in-depth description of the model, its generation and its calibration, the reader is referred to the work of Neumann et al. (2014). The model has extensively been used by Neumann (2014, Ch. 7/8) for the development of the minibus module presented in Chapter 17.

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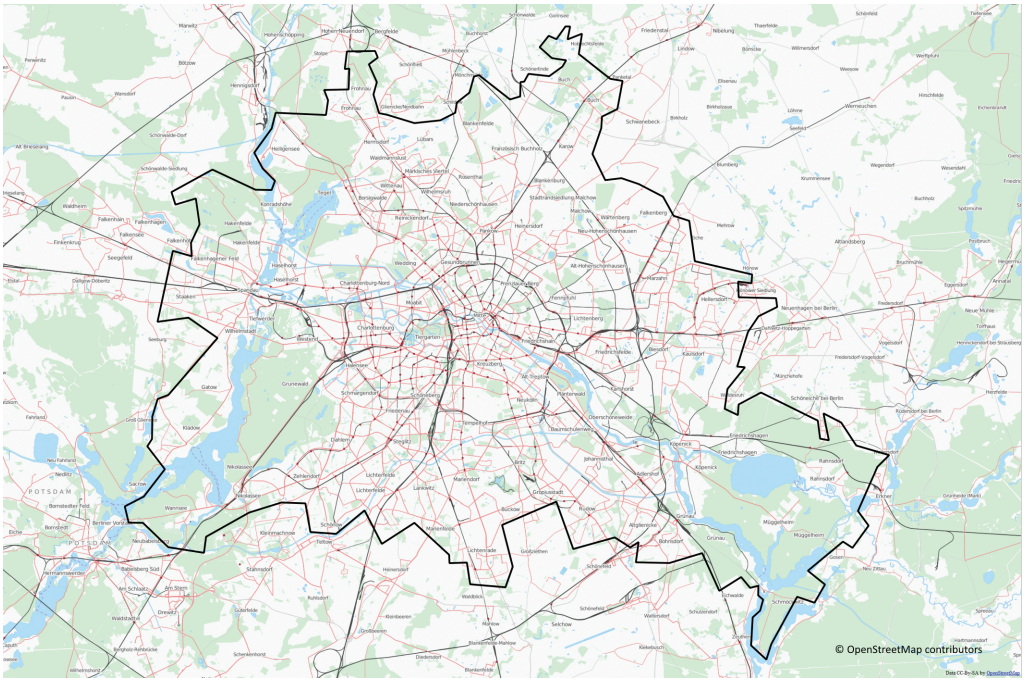

Figure 53.1: The city of Berlin and its transit network.