Telecommunications network design and related economic and business aspects are an ongoing research topic. Demand is changing continuously and telecommunications service providers have to cope with extended demands as well as quality of service (QoS) requirements. Moreover, the standardization of advanced mobile communication systems, in particular of new technologies like Long Term Evolution (LTE) and LTE Advanced imply new issues in mobile communications regarding available bandwidth. To take advantage of the full feature set of next generation networks, transport network design has to face new requirements, caused by architectural changes and technologies. Also newly defined interfaces impact the transport network requirements.

At the same time a tendency of locating network elements at fewer, central sites to reduce operational expenditure can be observed, in particular regarding the transport layer. That is, we have to consider the mobile market, related fiber-to-the-home developments as well as questions of how to analyse and design or re-design telecommunications networks and services from a technology and economics standpoint.

The minitrack aims to support research in these directions. It features theoretical developments, real-world applications and software related to Telecommunications Analytics and Economics. It consists of four papers on different aspects in this area.

The first paper is *Lock-ins in Network Effect Markets – Results of a Simulation Study* by Tobias Draisbach, Thomas Widjaja and Peter Buxmann. In a more general setting than just telecommunications, adoption processes often lead to lock-ins, i.e., one out of several technologies gets adopted by almost all market participants. An interesting research issue worth even further consideration refers to the specific character of social media network topologies and to which extent those topologies promote lock-in effects. Analysis shows that the tendency of a market to lock-in varies in different metrics if random topologies and real life social topologies are compared.

Jochen Wulf and Walter Brenner analyze the competitive effects between mobile and fixed broadband in their paper *Fixed and Mobile Broadband Substitution in the OECD Countries – A Quantitative Analysis of Competitive Effects*. Using a specific competition model known from ecology, their results suggest that mobile broadband demand is stimulated by a high demand for fixed broadband services. Hence, interestingly, the majority of consumers does not view fixed broadband as a substitute for mobile broadband but rather complement their fixed broadband access with a mobile access. As reverse effects are not clearly identifiable, currently, mobile broadband diffusion does not strongly affect competition in the fixed broadband market and bundling fixed and mobile broadband can provide super-additive customer value.

*Cooperative Private Next-Generation Access Deployment – A Relational View* by Felix Limbach, Rüdiger Zamekow and Michael Düser employs a relational view concept in order to assess how cooperation between private market players can contribute to reaching national broadband deployment goals. Findings are based on a combined grounded theory and case study approach with twenty-three managing experts from major telecommunication companies of the German broadband market.

Frank MacCrory and Shivendu Shivendu present *Multilayer Two-sided Platforms: The Role of Exclusive Contracts*. They show that exclusive contracts benefit entrant firms only if users have strong preferences for specific operating systems, and paradoxically users benefit if developers enjoy weak cross-side network effects from those users. This applies to mobile platforms when application developers can access the users only through two layers of the platform, namely operating systems and the carrier. The results base on a newly developed framework to study multilayer two-sided platforms and examine the impact of exclusive contracts by entrant operating system firms. As an example one may consider Apple launching the iPhone when Blackberry was widely available.