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Toward wholesale markets in last-mile bottleneck facilities: market and policy challenges

The perception that last-mile telecommunications access networks are a bottleneck facility owes much to the fact that there are significant fixed and potentially sunk costs associated with the construction of last-mile infrastructure. A significant share of such costs are associated with the outside structures (poles, conduit, and rights-of-way) used to support the wires. Technological trends (e.g., next generation wireless and wired access networks), new models of ownership (e.g., municipal ownership), of access (e.g., shared conduit), and construction raise the potential for reducing the extent to which outside plant might be perceived as a bottleneck facility. If appropriate outside structure elements were available in wholesale markets, this would help facilitate facilities-based competition, thereby reducing a priori calls for regulation. However, because of the heterogeneity in outside plant costs (e.g., costs vary with terrain and population density), availability (e.g., scarcity of rights of way), and access frameworks (e.g., local zoning laws, pole attachment rules), it seems likely that such markets would vary significantly in robustness and character by geographic area. This suggests the possibility of framing access rules that might vary by geographic area (Amendola & Pupillo, 2007). The potential of active wholesale markets for last-mile infrastructure elements raises a number of interesting questions for policy-makers (de Fontenay, Liebenau, and Savin, 2005): are such markets viable? are technical/market trends making such markets more likely? how might their emergence be promoted? how should policies address the likelihood that the robustness of such markets will vary significantly over a providers serving area?

This paper examines the mix of technical, regulatory and business issues that arise in implementing policies for markets in bottleneck inputs of telecom operators, municipalities and utilities. The paper will first approach the issue of infrastructure sharing claiming that if there is a need for such a market, this would change “natural monopoly” assessment of last mile facilities, reducing the need for strong regulatory open access rules. Second, the paper will review and assess the regulatory practices and current owners of infrastructures views on infrastructure sharing in Europe and the USA. Third, the paper will discuss the policy implications of infrastructure sharing. In fact, a closer consideration of what these markets for infrastructures might look like, suggests that their character and robustness will be heterogeneous (some locales will have such markets and others will not), suggesting that policies need to be responsive to this diversity. Finally, the paper will suggest policy recommendations focusing on two issues: a) what can be done to encourage the emergence of and sustainability of markets in bottleneck inputs? b) how to shape policies that are geographically heterogeneous and what are the benefits and the costs of doing so?