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Software Distribution Platform for Ad-Hoc Wireless Mesh Networks

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Software Distribution Platform for Ad-Hoc Wireless Mesh Networks

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Abstract. We present SDP - a software distribution platform for the Berlin Roof Net (BRN) - an ad-hoc wireless-mesh community network operated by volunteers in the city of Berlin, Germany. As most protocols that are currently used in BRN are still under development, updates of the BRN node's software become necessary rather frequently. Reliably distributing and simultaneously activating new, improved routing protocols or other software components in a decentralized network without centralized resources, and without significant disruption of the network, is quite a challenge. In this paper we will show that this task can be accomplished using an infection based distribution method, direct links for communication with neighboring BRN nodes, layer-2 TFTP for file transfer, and broadcasts for neighbor notification and time synchronization.

Keywords. Software Distribution Platform, Ad-Hoc Networks, Wireless Mesh Networks, Berlin Roof Net.

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