

Secure Service Provision in Ad Hoc Networks

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Abstract. Ad hoc networks are formed opportunistically as mobile devices come within wireless communication range of each other. Since individual devices are typically subject to severe resource limitations, it is both possible and desirable for a device to enhance its functionality by taking advantage (in a cooperative manner) of capabilities available on other devices. Service provision refers to the process by which devices advertise their willingness to offer specific services and discover other services. This paper describes a service provision model designed specifically for use in ad hoc settings. Security policies governing service accessibility can be specified at the application level while secure communication among devices is ensured by the implementation.