nTicket - Architecture of a highly scalable NFC based E-Ticketing system

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Abstract: nTicket is a project that aims to establish a performance-based pricing system for Public Transport by means of the new generation of NFC Infrastructure. The project is partly financed by a governmental, KMR_12 r&d fund.

nTicket technology enables the customers' phones to handle business logic, therefore, no active devices – like terminals - are required to be installed. As a result of the above, the deployment of nTicket is much more cost-efficient than that of a general E-Ticketing system.

To avoid potential trickeries, nTicket uses a system-wide PKI-like solution. Changing the source of the phone application will not allow hackers to create or modify ticket information.

To serve the great number of transactions generated by users in a city/country, nTicket introduces a set of new components built on top of a modularized architecture.

Keywords: E-Ticketing, Public transport, NFC, OSGi