



ROLLPAY CAR INITIAL PLAN

Revision 2

EVERYTHING...

1. Executive summary

This document describes the initial plans for ROLLPAY© CAR development, as seen by ROLLCOMM. It describes the role of car manufacturers', Tier 1 suppliers', ROLLCOMM's, financial firms', mobile carriers', merchants' role in the project, analyses business plan, target audience, expected penetration, and profitability issues. The document presumes that the reader is aware of the ROLLPAY© system, and has a basic knowledge about it, but is also readable without this knowledge.

Car manufacturers, Tier 1 suppliers shall receive a technical specification from ROLLCOMM that describes the protocol to be used between the car's on board computer, the merchant, and the financial firm. ROLLCOMM shall provide this for free, under the conditions of a Non-Disclosure Agreement. The NDA's only important condition is that the manufacturer and/or T1 supplier must not distribute the documents to a third party. ROLLCOMM shall provide all possible support and test utilities for the development. Probably the T1 supplier shall perform the actual development. ROLLCOMM shall also commit itself to the specification, and guarantee that the technology and components are available for financial firms and merchants too.

The end result is that the manufacturer can provide unique, premiere feature to its customers, car owners, and thus increase loyalty and brand value globally.

Mobile carriers' role in the system is to provide cars with Internet access. The exact technology of mobile internet to be provided for cars on the road is yet to be defined, but ROLLPAY© has no specific requirements, so any solution will be fine.

Financial firms shall not make a difference between ROLLPAY© CAR, ROLLPAY©, and other cashless payment solutions. To serve customers using ROLLPAY© CAR or ROLLPAY©, they will have to have the ROLLPAY© Center, but they won't have to make a difference between mobile phone-originated transactions and car-originated transactions. The most important aspect of this is that financial firms have no additional costs from ROLLPAY© CAR, but have more customers through it.

Merchants also don't make a difference between ROLLPAY© and ROLLPAY© CAR transactions. The required infrastructure is the same for both solutions, so they also won't have additional costs. ROLLPAY© CAR also doesn't require a POS terminal per cash desk, therefore the solution is much cheaper than any other cashless payment method.

Although there are many mobile phone-based payment solutions, all of them have certain pros and cons compared to ROLLPAY©. However, ROLLPAY© CAR is unique in terms of its ubiquitousness. If a store, restaurant, or any other POS features ROLLPAY©, it almost automatically features ROLLPAY© CAR as well.

Penetration is helped with the mutual positive feedback of ROLLPAY© and ROLLPAY© CAR, since any store featuring ROLLPAY© CAR almost automatically features ROLLPAY© too, and vice versa. Target audience needs some clarification and back-up with polls and questionnaires, but the initial plan is to address premium class cars and their owners.

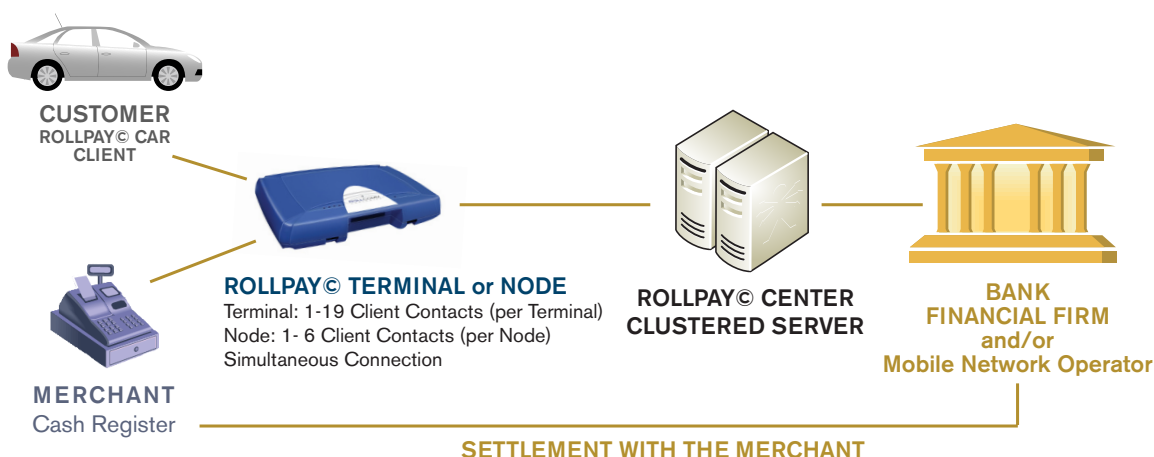
2. Details of operation

ROLLPAY© CAR is using Bluetooth to communicate. To understand how ROLLPAY© CAR works, first the components must be clarified. The ROLLPAY© CAR system has the following hardware components:

- The car's on-board computer, running the ROLLPAY© CAR Client software.
- An embedded Bluetooth module, connected to the on-board computer.
- A ROLLPAY© CAR Terminal, running at the merchant.
- Cash register, running at the merchant.
- ROLLPAY© Center, running at the financial firm.

There are two use cases for ROLLPAY© CAR. Use Case 1 is when the driver pays at a POS, for example a drive-through restaurant. Use Case 2 is when the driver performs a transaction from the car. Use Case 2 might contain some restrictions, e.g. transaction performing while the car is on the move might be prohibited, but this is outside the scope of this document.

2.1. Use Case 1: POS purchase

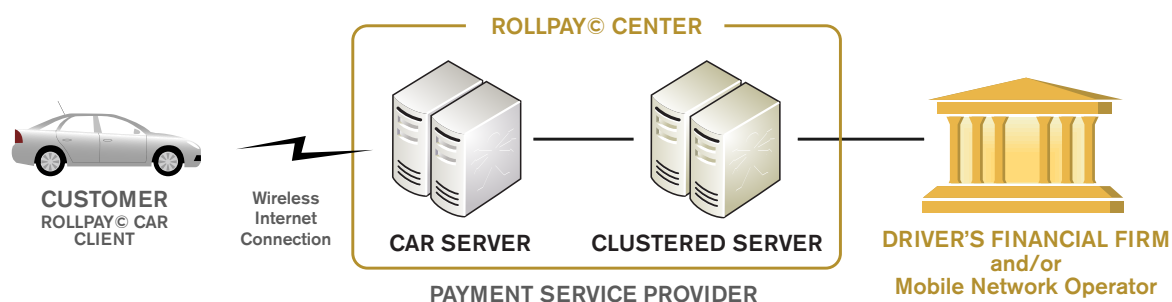


The ROLLPAY© CAR system's point is to collect all data about the payment in the ROLLPAY© CAR Terminal, and forward it to the ROLLPAY© Center for authorization. This is done in the following steps:

1. The driver activates the ROLLPAY© CAR Client software using the car's built-in display, and chooses to start a purchase.
2. The car's on-board computer looks for merchants nearby, and prompts the driver to choose the appropriate one. If there is only one merchant available, the manual selection can be skipped.
3. The car connects to the merchant's Terminal via Bluetooth, and gets a Customer Number. It is a 2-digit number, which uniquely identifies the customers currently in the queue.
4. The driver tells his Customer Number to the cashier. The cashier enters this number into the cash register.
5. The car prompts the driver to accept the transaction. The driver confirms it.
6. The Terminal receives the confirmation, sends all transaction details to the ROLLPAY© Center via a secured Internet link.
7. The ROLLPAY© Center authorizes the transaction, and sends transaction details back to the Terminal.
8. The Terminal notifies both the cash register and the car about the successful transaction. The car's built-in display shows the receipt of the transaction, and stores it into the receipt archive.

Since a Terminal is able to handle up to 19 simultaneous connections, and covers 100 meters, it is possible for the driver to get a Customer Number while still in the queue. Therefore by the time the driver reaches the ordering window, all he has to do for paying is telling the Customer Number to the cashier.

2.2. Use Case 2: Online banking



In this case, the ROLLPAY© CAR system's point is to let the driver conveniently set up a transaction, and perform it. In order to do this, ROLLPAY© CAR needs to build an Internet connection to the ROLLPAY© Center, and exchange data with it. The ROLLPAY© Center's ROLLPAY© CAR Server component connects to the driver's bank, and performs the requested transactions. To use an account, the driver must first register it. Performing a transaction involves the following steps:

1. The driver starts the ROLLPAY© CAR Client, and chooses to perform a transfer.
2. The Client prompts the driver with the login credentials which are necessary to log into the web interface of the bank, on its own interface.
3. The Client forwards this data to the ROLLPAY© CAR Server, which logs into the web interface of the bank with the supplied credentials.
4. The ROLLPAY© CAR Server performs the login, and forwards the account details to the Client.
5. The Client lets the driver set up the transaction, querying additional details from the Server, depending on the interface's capabilities.
6. When the transaction's details are provided by the customer, the transaction is performed, and the result is returned to him.
7. When the driver has no more thing to do, logs out the Client, which tells the Server to log out too.

The driver's password is not stored in the Server. Basically, the Client is similar to a browser displaying specifically built pages, and the Server is a translator that inputs HTML pages via HTTP, converts them to ROLLPAY© CAR Client-format, and sends them to the Client.



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