

## **IN FOCUS**

### **FASTAG: India's Digital Public Infrastructure for Vehicles**

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India has many categories of roads such as national highways, state highways, expressways, district roads, rural roads and many others. About two decades ago, most of these roads did not have tolls, i.e., one need not have to pay to drive on those roads. However, with the advent of “Public Private Partnership” (PPP) model where private enterprises were allowed to collect toll from vehicles that pass on these roads, while maintaining these roads, for a number of pre-determined years per segment of the road, There were also “Build Operate Transfer” (BOT) contracts between Government of India (GoI) and private enterprises. Under these contracts private enterprises could build roads, maintain and collect tolls from vehicles for a pre-determined duration and then transfer the operations of the road to the GoI. So, these private enterprises were in effect “toll operators”.

Insufficient maintenance of roads by private enterprises has been a challenge for GoIs and travellers in many countries. However, the toll roads in India had a few more. Each toll operator had its own mechanism to collect payment, many often in cash, obviously for the reason of not accounting the income. Cash also increased the wait at toll plazas, resulting in various degrees of road rage of travellers. As toll operators were different, there was no common way other than cash for travellers to pay any toll operators. To add, lack of stationery material and printers not working caused further delay in issuance of receipts. Another challenge was the under-valuation of contracts. As toll operators collected tolls in cash, they tended to underestimate the potential revenue. This resulted in GoI unable to realize the full revenue potential while auctioning the operation of tolls.

In December 2019, the GoI launched Fastag technology, developed and operated by the National Payments Corporation of India (NPCI). Fastag was made compulsory across all the tolls of the country in Apr 2021. All road vehicles, private and public, passenger and transport, two wheelers to multi-axle trucks, were ordered to be fitted with a Fastag which is an infrared sticker that uniquely identifies the vehicle and can be read at tolls. The mechanism works as follows: a vehicle owner buys a unique Fastag sticker from a bank or from offline vendors and pastes it to one's

vehicle. A vehicle owner can charge this vehicle Fastag with an amount, online. When the vehicle passes a toll, it is checked for sufficient balance amount for that toll and only then it is allowed to enter and its entry is recorded. If the amount is insufficient, then the owner has to recharge / top-up the amount for sufficient balance and then can enter. When the vehicle exits a toll, the amount, calculated based on the toll operator charges, is debited from the Fastag and is credited to the toll operator's bank account, after NPCI deducts its charge of about 0.9% of the toll charge + tax (Goods and Services Tax, the GST). The vehicle owner is informed immediately of the entry, exit, charged amount and balance amount, by SMS. A vehicle owner can charge and recharge / top-up the amount by various means such as net banking, Unified Payments Interface (UPI) and on eCommerce apps. Usage of eCommerce apps for charging is possible because NPCI has integrated Fastag with its Bharat BillPay System (BBPS) which is a network for all billers and payers, billers being both GoI and private entities. Fleet operators can manage, charge all their vehicle Fastags and obtain reports online, in a consolidated way. The charging of Fastag with any BBPS compliant app brought significant convenience and freedom to vehicle owners. Fastag brought about transparency of revenues earned at each toll all over India. This will help the GoI to realize better valuations at auctions of these toll ways. Wait duration at tolls has reduced and GoI had directed toll operators to reduce further using improved sensors at tolls. Real time information on vehicles and traffic is available, which helps improvement of highways and to plan construction of new roads.

There has been a new use of Fastag. It is interesting for two reasons. By changing the distance parameter in Fastag technology to duration, NPCI has been able to deploy the same platform for collecting parking fees. Private entities such as airport operators, malls, hospitals, multiplexes and such have adopted Fastag for their parking, voluntarily. This adoption is voluntary because the NPCI charges for enabling Fastag transactions is just about 0.9% of the charge amount + GST, which nearly eliminates the need of staff at these parking locations. This is good because hitherto parking revenues are now getting accounted via NPCI, again helping GoI earn taxes.

With Fastag, vehicle owners do not have to worry about the heterogeneity at tolls and parking places. Toll operators and parking area operators need not worry about the risks of handling cash (theft, damage and counterfeit) as well as receive the amounts into their accounts on a daily basis.