

## The future of the bicycle

Ian Pearson, Futurologist, June 2007

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As someone who loves cycling (in spite of common belief), is impatient, often lazy, and who spends far too much time in airports, the moving walkways that we see in airports inspired me to wonder about the economics of adding bicycle conveyors on commuting roads. I have no real idea how fast I normally ride, but let's say 7.5m/s on the flat. If there was a conveyor belt moving also at 7.5m/s along the road, it would halve the time it take me to get somewhere, and also greatly reduce the speed differential between me and passing traffic, making it safer to ride.

At first glance this looks a ridiculous idea, because we immediately think as engineers of the obvious fact that the first falling leaf would clog the system up, rain would cause havoc, cars encroaching onto the path would cause mechanical stress because of the speed differential between a conveyor and the road surface, and pedestrians would also try to step onto it and cause yet more havoc. The idea ought to be a total non-starter.

However...

Suppose instead that we add a metal plate to the bike, close to the road surface, and add linear induction motors to the idea! Maybe even the wheels would suffice as the plate, or widening the wheel rims, or flattening the tyres, someone else can do the physics. Suddenly there is no problem with clogging, rain, cars or pedestrians. There is a small problem of vandals trying to send metal objects at high speed along the road of course, but it is an easily soluble one.

Since roads usually have good electrical supplies along them for street lighting and cable runs, this ought to be worth looking at. If it could be solved, it would be a good way of encouraging cycling as a viable transport solution, and reducing carbon production. It can be rolled out gracefully according to demand, works well with cycle paths alongside roads, even those shared with pedestrians.

The amount of extra force given to the cyclist could be variable. Bicycles could be given RFID chips to identify them and the personal tastes of that cyclist indulged alongside billing. Some people might want lots of assistance or to go very fast, other want less assistance or to go slower. Since induction plates can be individually

controlled, and the bicycle plates can also be tweaked for height or inductance, it is easily customisable in real time.