

Business

Railways

Still aloft, just

Sep 28th 2006 | FRANKFURT

From *The Economist* print edition

Maglev trains lose some of their magic

SCHOOLBOY dreams of everyday travel by magnetic levitation (maglev) have been shaken but not destroyed after an accident on a test track at Lathen, Germany. On September 22nd a maglev train ploughed into a maintenance vehicle at 200kph (125mph), killing 23 passengers.

Magnetic attraction and repulsion allow maglev trains to travel along guideways at speeds of up to 500kph. Transrapid, a consortium of Siemens and ThyssenKrupp, has been testing maglev trains at Lathen since the mid-1980s. Central Japan Railway (JR Central) has another test track west of Tokyo, which uses more cumbersome technology, relying on super-cooling. This week JR Central said it would spend ¥355 billion (US\$3 billion) on lengthening and renewing the track, part of it underground, to experiment with longer and faster trains. In both cases the technology is expensive, so that maglev trains need public backing. Only one, which runs the 30km between Shanghai and Pudong Airport in China, is operating commercially. It was built by Transrapid and helped along by a large subsidy from the German government.

Other projects are in the pipeline, but none has got beyond a feasibility study. China plans to extend the Shanghai line for another 160km to the city of Hangzhou. But Transrapid has not yet secured the contract, which may depend on an agreement to share the technology.

In Germany, Transrapid and Deutsche Bahn would like to build a 37km link between Munich's airport and the central railway station, cutting the average journey time from 40 minutes to ten. The federal and Bavarian governments are in favour, but the local mayor is not: he prefers a conventional railway which would serve non-airport traffic too. Even if he loses the argument, there is no guarantee the government will find the money for the Transrapid line—whose role would be partly to show off the system to potential buyers.

Longer-distance projects in Germany were considered and then rejected, mainly because the country is well served by high-speed trains between big cities. Hamburg to Berlin, which might have been the exception, does not have enough demand from passengers.

It may be that maglev trains stand a better chance in countries where existing railways are less efficient, such as America and Britain. But finding public money is a problem for even the most serious schemes: the California Regional Maglev Project, the Baltimore-

Railways

Still aloft, just

Sep 28th 2006 | FRANKFURT

From *The Economist* print edition

Maglev trains lose some of their magic

Washington Maglev Project and the Pennsylvania High-Speed Maglev Project. Another American scheme, which may belong more in the realm of science fiction, is SkyTran, proposed by UniModal, of Montana. It involves two-seater maglev bubbles scuttling around a three-dimensional urban network or between cities at up to 240kph.

In Britain, UK Ultraspeed, backed by Transrapid, argues that high-speed links, for example across the Pennines, would transform investment patterns. If pairs of cities, such as Leeds and Manchester or Glasgow and Edinburgh, were linked by 15-minute journeys, they could become single economic areas. Although this may be pie in the sky, politicians are beginning to like the sound of it. Last week, local governments in north-east England pledged to examine UK Ultraspeed's proposals.

Over longer distances maglev trains face competition with airlines. But Alan James, project leader at UK Ultraspeed, argues that three hours in a train is more convenient than a one-hour plane trip. A study by America's Federal Railroad Administration presented to Congress last year talks of a "sweet spot", a range of inter-city journeys of 240-800km, for which maglevs could provide the optimal link. With air travel threatened by emission taxes and heavier security, maglev trains may begin to look attractive over greater distances.

Alternatively, of course, they could remain a white elephant. The crash has prompted a closer look at safety, even though the cause was probably human error. In theory, because of the way they are powered, maglev trains can never collide. Whatever the outcome, schoolboys will continue to dream of trains that never touch the ground.

###