Beijing to London by Rail

China proposes transcontinental train network

China is championing an ambitious high-speed rail network that would transport passengers from London to Beijing in just two days at top speeds of 320 kilometers per hour. The multinational plan to integrate Eurasia with bullet trains is among the most far-reaching rail projects since the Russians built the Trans-Siberian Railroad and the British envisioned locomotives running between Cairo and Capetown.

Ultimately costing billions of euros, the project would entail the construction of three lines. The first would potentially connect southern China with Singapore via Vietnam, Thailand and Malaysia. A second would originate in northern China, pass through Kazakhstan and Uzbekistan, and possibly end in India. The third would start in China's northeast and head north through Russia and Kazakhstan, ultimately reaching Western Europe.

Routes have yet to be finalized, but the goal is to increase international mobility by joining the mostly disconnected Asian and European rail systems. A construction timeline proposes completing the project as early as 2020. "We will use government money and bank loans, but the railways may also raise financing from the private sector and also from the host countries," said Wang Mengshu of China's Academy of Engineering, as quoted by EUobserver.com.

In the eyes of industry experts, China's advancements in high-speed rail, including the 394-kilometer-per-hour (245-mph) Harmony Express bullet train, connecting Wuhan and Guangzhou, lend credibility to the Beijing-to-London proposal. Germany's Siemens, France's Alstom, Canada's Bombardier and Japan's Kawasaki all supplied engineering technology for the Harmony project, according to Germany's *Der Spiegel* magazine. If neighboring countries lack money to contribute to the project, the Chinese are floating creative financing ideas, including accepting raw materials such as oil, gas and timber as payment. "We would actually prefer the other countries to pay in natural resources rather than make their own capital investment," Wang told the *South China Morning Post* in March 2010.

Historical precedent

This is not the first idea of its kind – it took Czarist Russia one-quarter century to build the Trans-Siberian Railroad, which upon completion during World War I linked St. Petersburg and Vladivostok. The never-completed Cape Town-to-Cairo railway was supposed to connect Egypt and South Africa in the 19th century, but failed for lack of funds.

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The high-speed train China launched in 2009 transports passengers 1,067 kilometers between Wuhan and Guangzhou in less than three hours.

CHINA PROPOSES

a transcontinental route for the high-speed rail.

THE TRANSPORT POLITIC/*PER CONCORDIAM* ILLUSTRATION

High-Speed RAIL

Travel at 155 mph or faster

- Proposed Chinese Trans-Continental Network
- Existing Lines
- Lines Under Construction
- Planned Lines
- Proposed Lines

Travel at slower speeds

- Main Intercity Lines

The French hatched a rival plan to link Senegal and Djibouti. The proposal died when the British intercepted a French expedition searching for a route across Ethiopia. The Portuguese drew a map documenting Portugal's claim to a route between Angola and Mozambique, today Zambia, Zimbabwe and Malawi. Territorial disputes with Great Britain then thwarted Portugal's ambition to connect the lands by rail.

In 1865, Belgian businessman George Nagelmackers envisioned "a train that would span a continent, running on a continuous ribbon of metal for more than 1500 miles." It was the original idea for the Orient Express, whose first 80-hour excursion from Paris to Constantinople took place in 1883. Passengers relaxed in plush compartments complete with beds and sinks, waited on by stewards serving tea and brandy. The Orient Express survived two world wars but ceased to operate in December 2009. The name vanished from European railway timetables, a victim of high-speed trains and cut-rate airlines, according to the United Kingdom's *Guardian* newspaper.

Creative financing

The Chinese are eager to deal with potential partners on this high-speed railway project. China offered to fund the Burmese line in exchange for rights to the country's rich reserves of lithium, a metal widely used in batteries, the European Rail Industry website reported. The country is also reportedly negotiating financing with Iran, Pakistan and India, countries already proposing to supply natural gas to China. In exchange for railway finance, China would receive additional timber, minerals, oil and gas and the means to transport them, raising questions about China's motives. The Transport Politic, an

online news site, questions whether the rail expansion is a "reasonable foreign investment on the part of China, or is it an attempt to take control of the economies of poor countries." China maintains that the original idea for the transcontinental railway originated with other countries eager to enlist China's experience and technology.

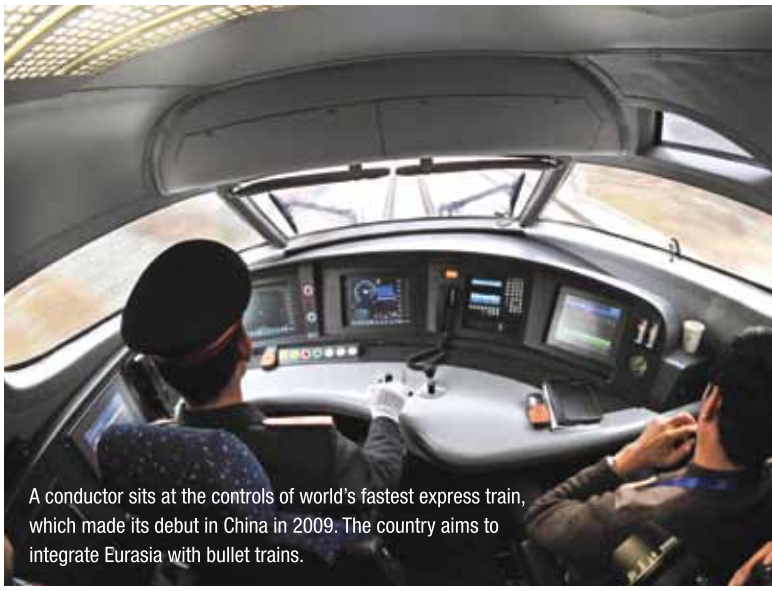
Safety is key

Even after the project is paid for, keeping passengers safe would be a complex task. Rail travelers are not immune to violence, and over the past couple of years, extremists have bombed trains in London and Madrid, derailed Russia's Nevsky Express, and attempted to derail a TGV high-speed train between Lyon and Paris by planting explosives. However, considering the vulnerabilities of rail travel — unpatrolled tracks and stations packed with passengers untroubled by strict security searches — terrorist attacks happen less frequently than one might expect. Between 1998 and 2003, rail attacks killed 431 people. Though more numerous and deadly than those on airports or airplanes, rail attacks have not resulted in as many deaths as those on buses and related infrastructure such as ticket offices and depots, according to "Terrorism and Rail Security," an international report by the Rand Corporation. Rand emphasized that methods used to secure airplanes — passenger profiling, screening, metal detectors, bomb-sniffing dogs and armed guards — are impractical for passenger trains because of the additional costs and travel delays. Rail passengers expect fast and inexpensive service.

Terrorists generally choose targets that carry symbolic value or generate substantial public reaction. "The Moscow bombings served to remind us just how vulnerable rail networks are to terrorist attack," the website railway-technology.com noted in June 2010. In an attempt to balance security with convenience, rail companies have taken precautions to prevent attacks. Although not all rail security policies are made public, among those implemented are: removing trash containers that could hide bombs, increasing the presence of security officers, adopting video surveillance in and around stations, randomly inspecting baggage, and encouraging riders to report suspicious activity. Some security analysts argue that the best preventative is a focus on counterterrorism and intelligence collection. "Ensuring anything like 100 percent protection against terrorist attack is not a viable option," said Adrian Dwyer, the British Transport Police's counterterrorism risk advisor.

Additional hurdles

Safety isn't China's only obstacle to overcome in building the London-to-Beijing route. Once the difficulty of financing is settled, differing visa requirements among the nations on the route could hinder travel. Railroad track widths need to be standardized. High-speed rail lines are



A conductor sits at the controls of world's fastest express train, which made its debut in China in 2009. The country aims to integrate Eurasia with bullet trains.

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three times more expensive to build than regular ones, and different countries continue to use different track sizes. Vietnam has agreed to change its standard gauge, according to the U.K.'s *Daily Telegraph*, and Kyrgyzstan continues to use a narrower gauge than China. Track renovation and gauge change negotiations are under way with other countries. "The availability of good infrastructure is pivotal to the growth of trade between nations," Michael Clausecker, director-general of the Association of European Rail Industry, said in an EUobserver article in March 2010. But the same article asserts that the low cost of maritime transport makes rail hard to justify in many cases.

The proposed route conspicuously avoids Afghanistan. The country possesses only two short lines, near its northern border with Uzbekistan and Turkmenistan, although China is considering indirect links through Tajikistan and Pakistan. Those links could expand with the growth of stability in Afghanistan. A report published by the Central Asia-Caucasus Institute & Silk Road Studies Program in May 2010 recommends that NATO "reconnect Afghanistan with both East and West, opening to citizens the local, regional and continental global markets."

Whether China can overcome the immense challenges it faces with a project of this magnitude is uncertain, but few dispute that opening up previously isolated regions and linking the economies of Asia and Europe by rail is beneficial. "We foresee that in the coming decades, hundreds of millions of people will migrate to the western regions [of China], where land is empty and resources untapped," Wang told the *South China Morning Post*. "With the fast, convenient transport of high speed trains, people will set up mines, factories and business centers in the west. They will trade with Central Asian and Eastern European countries." □