Complete mobility.
“Mobility is the basis for economic growth and prosperity in the fast developing world, thus the challenges for mobility are growing constantly. Innovative, intelligent, and integrated solutions are needed to keep everyone mobile”.

Joachim Kraege  
Senior Vice President of Siemens Ltd., China  
General Manager of Mobility Division
Demographic change, urbanization, climate change and globalization are shaping our future and posing constant challenges. As one of the most promising market in the world, China is witnessing a rapid technological development in all areas of life and regions. The mega events such as Olympic Games Beijing 2008, Expo 2010, and Asia Games 2010 Guangzhou help to boost the Chinese economy in all regards.

Boasting more than 100 cities with a population of one million and above, China requires efficient, safe, reliable and environmentally friendly transportation and logistics solutions to keep pace with the rapid development - on one hand to help further develop the country’s infrastructure and on the other hand to master the enormous challenges in the field of urban transport, interurban transport, and logistics. This development trend underlines the fact that Mobility is the biggest challenge when it comes to ensuring sustainable growth for the future and consequently increasing the quality of Chinese people’s life.

On the strength of our advanced technologies and strong innovation capabilities, we demonstrate ourselves as a reliable and long-term partner in China to accomplish these tough challenges. Siemens has been acting as an integral part of Chinese industry for more than 100 years, and we understand the specific challenges for mobility of the country.

Together with all of you, we are looking forward to provide the answers to the toughest questions confronting China’s transportation and logistics industry.

Joachim Kraege
Senior Vice President of Siemens Ltd., China
General Manager of Mobility Division
Despite its complexity, today’s rapidly changing world holds great opportunities for those looking ahead. The four megatrends - demographic change, urbanization, climate change and globalization are having an unprecedented impact on our lives and on vital sectors of our economy – Industry, Energy and Healthcare. These megatrends are already taking shape in the world’s megacities, raising a number of challenging questions:

- How can we ensure environmentally friendly, reliable energy supply?
- How can we create effective and affordable healthcare systems?
- How can we guarantee efficient manufacturing as well as sustainable public and private infrastructures?

Siemens is providing innovative answers to these toughest questions confronting Industry, Energy and Healthcare. This is a Siemens tradition - and has been since 1847.

Our employees are driven by the challenge to create leading-edge solutions worldwide in nearly 190 countries. A network of ideas and experience set in motion by Werner von Siemens 160 years ago.

China is, and will continue to be, the epicenter of the four megatrends including demographic change, urbanization, climate change and globalization, representing both the considerable challenges and huge opportunities.

In China, the mindset of Siemens is to build a collaborative framework with the customers to ensure that we address their issues and challenges with the right types of innovative products and services.

Business relationships with China were established as long ago as 1872 when our company supplied the first pointer telegraph to China. Another important milestone was 1994 when Siemens Ltd., China was founded which represents the complete Siemens portfolio – even including household appliances. The development and implementation of the infrastructure play a major role. We support operating companies in close partnership over the complete lifecycle of such systems – with the objective to enhance the comfort and quality of Chinese people’s life.


In the next pages you can read more about Siemens’ answers for Mobility: Complete mobility. We will help China face the mobility challenges in the future.

Siemens Ltd., China 2008:

- New orders*: RMB 65.5 billion
- Sales*: RMB 57.0 billion
- Number of employees: Over 43,000
- Operating companies: Over 90
- Regional offices: 61

*w/o Com & SV
Answers for mobility

Complete mobility.

Ensuring mobility is one of the big challenges in our society. We need networked traffic and information systems to remain mobile in future for safe, cost-effective and environmentally friendly passenger and cargo traffic. That is why, with “Complete mobility”, Siemens creates integrated efficient transport and logistics solutions, from infrastructure equipment for rail and road traffic, rail vehicles through to airport logistics and postal automation.
Our goals:

- Efficient management of growing traffic volumes
- Optimization of modal split: providing the right transport mode for each purpose and making efficient use of the strengths of each transport mode
- Optimum coordination of rail, car, airplane and ship transport modes, and intelligent interlinking with modern information and communications technologies
- Central collection and sharing of technological know-how
- Environmental protection

Complete mobility.
Integrated solutions for efficient people and freight transport.

We can ensure mobility on a sustainable basis only if all transport modes are effectively networked. Siemens has all the expertise and technologies needed for providing state-of-the-art intermodal transport systems.
Our portfolio

Siemens is the only company worldwide that unites virtually all capabilities needed for offering integrated traffic and logistics solutions from a single source.

Urban

We have integrated system with high performance and seamless coordination of all transport modes to successfully manage the growing urban traffic.

Rail traffic
- Tramways and light rail systems, subways, fully automated vehicles
- Rapid transit rail and regional trains
- Rail automation systems
- Overhead contact lines and rail power supply systems
- Components
- Services

Road traffic
- Traffic control systems and centers
- Traffic management systems and centers
- Parking systems
- Toll systems
- Tunnel systems
- Components
- Services
Interurban
We provide regional transport solutions that connect surrounding regions with city centers as well as fast, environmentally compatible cross regional solutions that link cities with one another.

Rail traffic
- High-speed trains
- Intercity and regional trains
- Mainline passenger coaches
- Electric and diesel-electric locomotives
- Rail automation systems
- Overhead contact lines and rail power supply

Road traffic
- Traffic control systems and centers
- Traffic data acquisition systems
- Toll systems
- Tunnel systems
- Components
- Services

Infrastructure and Logistics
We optimize existing infrastructures, increase transport capacities and improve the efficiency of logistics supply chains.

Freight logistics
- Freight locomotives
- Cargo systems
- Postal automation
- Mail distribution centers
- Baggage logistics (RFID)
- Freight logistics systems

Airport logistics
- Airport rail links
- Parking management
- Fully automated passenger transport
- Baggage and cargo logistics (RFID)
- Airfield lighting

Infrastructure
- Railway automation
- ETCS projects
- Traffic management systems and centers
Our innovation

Transrapid in Shanghai
The Transrapid in Shanghai is a technological superlative and a forward-looking answer to the transportation problems of a mega city like Shanghai. The Transrapid takes only 7.5 minutes to travel 30 km and was handed over as a turnkey installation after only three years’ construction time.

Oslo Metro
We are setting standards in environmental compatibility with the Oslo Metro. Compared to the predecessor vehicles, the new trains save around 30 % energy. And they are still worth something at the end of their service life: almost 95 % of the materials used in the trains can be recycled.

Eurosprinter
As a modern locomotive platform supporting four systems, the Eurosprinter opens up new perspectives in interoperable passenger and freight transport. For the first time in the history of European rail systems, an electric locomotive based on Eurosprinter can run from the Bosporus all the way to Norway’s North Cape, operating on all four of the rail power systems common in Europe - including country specific supplementary equipment and tailored to customer requirements.

"Ruhr Pilot" Traffic Management Center
As the leader in a consortium, we established the "Ruhr Pilot" Traffic Management Center in the German Ruhr area, which for the first time provides an overview of the entire regional traffic infrastructure. It plays an important part in supporting meaningful information so that the right traffic control decisions are made to match the current situation.
Fully Automated Metro Operation

Fully Automated Metro Operation allows flexible adaptation of the existing transport capacity to the changing level of demand. This goes not only for Nuremberg or Paris, but also for Beijing with its Metro Line 10 that served the venues for the 2008 Olympic Games.

Sitras SES

The Sitras SES energy storage system can be used as a temporary buffer store. The energy recovered when the vehicles are in braking mode is stored and made available for subsequent use. Depending on the system installed, up to 500,000kWh of the energy requirement can be saved. It has been used for Madrid Metro and Beijing Metro Line 5.

Railcom Manager

Our Railcom Manager enables us to create a seamless network of information, surveillance and automation systems so that passengers can feel even safer.

Postal Automation Redirection System (PARS)

The Postal Automation Redirection System (PARS) is an intelligent system developed by Siemens. The United States Postal Service (USPS) is installing the system nationwide to be able to cope with the millions of address changes every year. PARS will enable incorrectly addressed letters to be redirected so that they reach their appointed destinations reliably and by the most direct route.
One of our most important objectives is to sustainably improve the mobility in China. Since 1899 when Siemens delivered the first trams to major Chinese cities, the more than 100-year cooperation history between China and Siemens has verified our long-term commitment to Chinese transportation and logistics as a strong and reliable partner.

Strong local commitment for Mobility Division
Siemens Mobility has its own procurement organization in China. It is part of the Siemens worldwide procurement network. This department is the interface to the suppliers. We sourced locally for materials and services used in local manufactured projects and joint ventures in China (Local Sourcing). Moreover, we leveraged the suppliers base developed from local sourcing projects and introduced them to participate Siemens Mobility worldwide projects (Global Sourcing) and achieved great cost savings. Our procurement organization is located in Shanghai, Xi’an, Zhuzhou and Beijing today.

We are convinced that we can only work closely with our Chinese partners by having deep roots in China. This is reflected in the fact that we have not only offices in Beijing, Shanghai, Guangzhou, Shenzhen and Zhuzhou, but also many local partnerships and especially three joint ventures in the core areas of our business:

**Siemens Traction Equipment Ltd., Zhuzhou** (Hunan province) – founded in 1998 and involved in supplying the key components for the propulsion systems of locomotives and metro vehicles.

**Siemens Signalling Co., Ltd. in Xi’an** (Shaanxi province) founded in 1995 and responsible for the development, design, manufacture and sales of signalling products and systems for mainline, mass transit, special railways, other rail bound transportation systems, and the related engineering and services. With the development of SSCX, Siemens AG decided to develop SSCX into its center of competence for railway signalling products and systems for China and Asia-Pacific. Today, SSCX is already one of the main suppliers in the projects of main line transportation and mass transit home and abroad.

**Saitong Railway Electrification (Nanjing) Co., Ltd. (SREN) in Nanjing** (Jiangsu province) - founded in Jan. 2005 in Nanjing, Jiangsu province. SREN can design, manufacture and sell railway electrification products such as aluminium steel conductor rail system, rigid overhead contact line system for mass transit and 27.5kV GIS switchgear, 27.5kV Indoor Single-pole vacuum circuit breaker, Overhead Contact Line components, 27.5kV Outdoor Single/Double-pole vacuum circuit breaker for main line with advanced technology and good service.
Our references

**CRH3 High-speed Trains**: China’s first high speed trains with the continuous operation speed of 300km/h and the maximum test speed of 350km/h. The contract of building 60 CRH3 was granted to Siemens and its consortium partner in Nov 2005. It is Siemens China’s biggest single contract ever. The first 5 trains were successfully put into operation as planned to serve the Olympic Games Beijing 2008.

**Beijing-Tianjin Dedicated Passenger Line**: China’s first 300km/h dedicated passenger line(DPL) with a design speed of 350km/h, and a 116-kilometer high-speed rail link between Beijing and Tianjin. Siemens supports the project by supplying signalling and communications equipment and a power supply system. This line is the pilot project of the Minister of Railways for new high speed railway networks in China and therefore is regarded as the key project of the DPLs.

**Locomotives**: In the past more than 10 years, together with its local partner, Siemens has supplied DJ1 and HXD1 electric locomotives to Chinese railway and contributed to relieving the freight transport pressure, especially the coal transport pressure on DaQin Line. Siemens also supplied propulsion and control system to Chinese companies for building 500 6-axle high power electric freight locomotives in China. They represent the world’s most powerful locomotives.

**Harbin-Dalian Electrification**: Till now the longest electrification line in the world with 954 km in length. Together with consortium member, Siemens signed the contract in 1999 and the project was finished in 2001 after 24-month construction time.

**Transrapid Shanghai**: World’s first commercial Maglev line. The inauguration trip was made just two years after the contract was signed on December 31, 2002. Siemens provided propulsion & power supply as well as operation control system. The Transrapid started commercial operation in early 2004. The fully automatic Transrapid system has reached 99.93% technical availability.

**Metro Shanghai**: Siemens has been the project partner from the construction of the first line in 1989 up to the recent Line 13(Expo Link), by supplying state-of-the-art rolling stocks, traction power supplies, telecommunication systems, signaling systems, as well as project management.
Metro Shenzhen: We have involved in the construction of Shenzhen Metro Line 1, Line 1 extension and Metro Line 4 Phase 1 projects with our advanced signalling and control systems, propulsion systems, as well as good project management.

Metro Nanjing: Siemens signalling technology ensures metro systems punctual and safe operations. Nanjing Metro Line 1’s successful operation starting from Siemens, which set the solid foundation for both sides’ further cooperation on Nanjing Metro Line 2 and Line 1 Extension Project.

Metro Beijing: By supplying power supply and signalling and control systems, we are actively involved in the infrastructure construction of Beijing Metro projects, such as Beijing City rail, Beijing Metro Line 5 and Beijing Metro Line 10 including Olympic Branch.

Metro Guangzhou: Since 1994, we have contributed to the construction of all existing metro lines in Guangzhou including Guangfo Line. We supplied train vehicles, power supply systems, propulsion systems, signalling and controlling systems, as well as other systems and products. The metro trains we delivered for Guangzhou Line 3 project are China’s fastest metro trains so far.

Wuhan Urban Traffic Control System (UTC): Biggest Urban Traffic Control turn key project in China. In this project, Siemens will equip more than 426 junctions with complete traffic control technology including CCTV monitoring, Route Guide System(RGS), Real time Adaptive traffic control system, traffic lights and latest communication system linking a main control center and 2 sub-centers in Wuhan. It is expected that the traffic efficiency of Wuhan will be tremendously improved when the system will be put into operation in 2009.

Baggage Handling Systems for Beijing Capital International Airport (BCIA): One of the world’s biggest baggage handling systems, the Siemens baggage handling system, reflecting state-of-the-art design and utilizing the world’s most advanced technology was put into operation right on schedule at Terminal 3 of Beijing’s Capital International Airport. With its capacity to sort and transport up to 19,200 baggage items per hour, this line was successfully put into operation before Olympic Games Beijing 2008.

Guangzhou Mail Center: The first integrated, large-scale automated mail sorting and distribution center in China to be supplied by a foreign general contractor and systems integrator. The system includes new mail trays and roll cages as well as new standard barcode labels.
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The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.