

High-Speed Rail Development for the Next Generation UIC Highspeed 2012 held in Philadelphia, USA in July 2012

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In a couple of years we will see the 50th anniversary of the first advent of high-speed rail in the world, achieved in 1964 by Japanese National Railways (JNR). Afterwards, French National Railways (SNCF) developed the TGV system while JNR and Japan Railways, organizations created by privatized JNR, improved the Shinkansen high-speed rail system. After the introduction of TGV, the system of TGV was installed into Korea Railroad (KoRail) in 2004 with the name fondly called KTX. The Shinkansen system was also implemented in Taiwan in 2007. China Railway bought high-speed rail systems from Japan Railways, SNCF and other railway companies in Europe and constructed a high-speed rail system in 2011. Currently, the total service line length of operating high speed lines in the world is 17,547 Km, while under-construction and planned lines are 9,289 Km and 15,476 Km, respectively. Thus, we have already seen the next stage of high-speed rail development which began after the beginning of this century 12 years ago when the basic high-speed rail systems began to be implemented.

The US is a country where high-speed rail systems are planned as an intercity mass-transportation system. Some large urban areas also have plans to introduce high-speed rail systems. The State of California is expected to construct a high-speed rail line. The 8th World Congress on High Speed Rail or UIC Highspeed 2012 was organized by International Railway Union jointly with American Public Transportation Association and was held in Philadelphia, US in July 2012. Only five days prior to the conference, the California State Government decided to prepare a budget to construct a high-speed track for Amtrak to prepare for high-speed operation in the future. The meeting, therefore, was timely. To lead and direct the discussion at the meeting, CEOs visited the US from Japan Railways, Taiwan High-Speed Rail, KoRail, China Railway and SNCF, all leading companies developing or operating high-speed rail systems. About 1,000 participants joined the meeting from 37 countries, including 184 speakers.

RTRI or Railway Technical Research Institute provided two speakers to the meeting to introduce specific technologies for high-speed rail operation. In consideration of the meeting venue of the US, RTRI gave a paper on how to successfully plan a new high-speed railroad track in countries subjected frequently to earthquakes. California

is one of the places where high-speed rail is expected in the US and is also frequently hit by earthquakes. Mr. Murono presented his technologies and experience to successfully implement high-speed line planning to avoid or reduce damage to be caused by earthquakes. This is perfect timing to indicate his concept to the people in the US, who want to bring high-speed rail systems to California. In his session, they enjoyed discussions on how to direct high-speed rail construction even in an earthquake "nest" such as California. The technologies should be helpful to California when the first section of the Amtrak training line is constructed and when it is extended as a real high-speed service line.

At the meeting, a key phrase, "the next generation" was stressed. This means that high-speed rail systems have already been established, with those concerned now looking for places where the systems are to be installed. They believe that the systems will bring the next generation easier and faster transportation services as a heritage from the current generation, resulting in a prosperous society to be technically and financially supported with such passenger rail services. Thus, their goal for high-speed rail development is to be for "the next generation."



Fig. 1 Mr. Murono showing his paper on successful planning of high-speed rail in an area where earthquake shocks are anticipated



Fig. 2 Participants from RTRI, enjoying a ride of a special train organized by the host for the welcome reception venue