

# New Challenges for Winter Road Service



# 冬道 Daily Bulletin

Winter Roads  
Fuyu Michi

Association  
mondiale  
de la Route



World Road  
Association

## Opening Ceremony of the XIth PIARC Int'l Winter Road Congress First in Asia, first in this century

Record number of participants: 2,200 people from 62 countries

After much anticipation, the XIth PIARC International Winter Road Congress opened on January 28. The four-day event has Sapporo Dome as its main venue. The Congress is held every four years for the purpose of exchanging technologies and information related to winter road management. The first such event to be held in Asia, this year's Congress is the largest in its history, with 2,200 registrants from 62 countries. At the opening ceremony, Mr. Michio Suzuki (Japan), President of the XIth PIARC International Winter Road Congress, 2002, Sapporo, Japan, officially opened the conference, and Mr. Olivier Michaud, President of PIARC, addressed the delegates. Performances following the speeches thoroughly entertained the attendees, and ushered in the high spirits that are hoped will carry throughout the rest of the conference.



### For the Promotion of International and Regional Exchanges



**Tatsuya HORI**  
Governor of Hokkaido

On behalf of the citizens of Hokkaido, I would like to sincerely welcome the approximately 2,200 Japanese and international attendees from more than 60 countries to the XIth PIARC International Winter Road Congress, 2002, Sapporo. I hope that our guests and visitors from around the world will have active discussions on winter road technology, and address related issues and solutions toward achieving positive results. The Congress is expected to contribute immensely to international and regional exchanges, thus deepening our understanding. I would be very grateful if you would take this opportunity to discover and understand more about all that Hokkaido has to offer.

### Toward a Better Living Environment in Winter



**Nobuo KATSURA**  
Mayor of Sapporo

On behalf of the citizens of Sapporo, I would like to warmly welcome the participants from around Japan and from overseas to Asia's first ever PIARC International Winter Road Congress. It is very significant for Sapporo to host this four-day Congress that has attracted so many researchers from around the globe. This event provides the opportunity to discuss and exchange ideas on a broad range of winter road-related topics, such as the environment, energy, and ITS. I hope that this Congress will help improve winter living conditions not only in Sapporo, but in all the cold, snowy regions of the world.



# Toward Technological Innovation

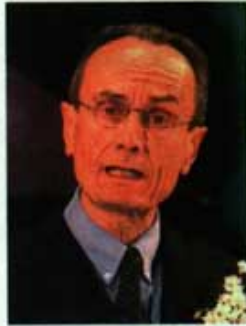


Opening Declaration

**Michio SUZUKI**  
President of the XIth PIARC International Winter Road Congress, 2002, Sapporo, Japan

*I am delighted to welcome the many Congress attendees and guests from Japan and around the globe to the first PIARC International Winter Road Congress of the century and the first ever in Asia. Sapporo Dome, the Congress site, is serving as a new center of cultural exchange and athletics in Sapporo. Indeed, it is slated this year to host games of the FIFA World Cup. I hope that, as in past Congresses, this Congress will prompt an active exchange of ideas during its sessions and will mark a new departure for innovative winter road technologies. As the Congress President, I hereby declare the XIth PIARC International Winter Road Congress to be open.*

## Road Congress Opens in Snowy Sapporo



Summary of the Address by the President of PIARC

**Olivier MICHAUD**  
President of PIARC

The XIth PIARC International Winter Road Congress opened today with Olivier Michaud, the President of PIARC, welcoming attendees from 62 countries to Sapporo. At the Opening Ceremony, President Michaud pointed to the significance of the Congress as the first PIARC International Road Congress of the 21st century and the first ever in Asia. He described Sapporo as an ideal location for the event, because of its severe climate and prominence as a Winter Olympic city. Looking back on the history of PIARC, President Michaud recalled the organization's progress over its century of existence and noted Japan's active participation. He praised Japan's cultural and economic achievements, which have been supported by what he described as "fine transport services" and a "superb road network." He thanked the Technical Committee on Winter Road Management (C17), and its chairman, Tadayuki Tazaki

(Japan), for their activities. He went on to outline the main priorities of PIARC in its quest for better roads. Dignitaries from Japan who attended the address included Mr. Toshiki Aoyama, Vice Minister of Land, Infrastructure and Transport (MLIT), Mr. Michio Suzuki, President of the Japanese Organizing Committee, Mr. Tatsuya Hori, Governor of Hokkaido, Mr. Nobuo Katsura, Mayor of Sapporo, Mr. Hisakazu Ohishi, Director General, Road Bureau, MLIT, Mr. Michio Hirano, Director General of the Hokkaido Regional Development Bureau, MLIT, and Dr. Hiroshi Mitani, Past President of PIARC. Members of the PIARC Executive Committee also were present.

## Greeting from Distinguished Guest



Welcoming Address by the Vice Minister of Land, Infrastructure and Transport

**Toshiki AOYAMA**  
Vice Minister of Land, Infrastructure and Transport

*On behalf of the Japanese government, I would like to welcome all of you to Japan and to the city of Sapporo. The cold climate and heavy snowfall that prevail in the city around you are typical of more than 60% of Japan's land area, where 20% of the population resides. In these regions, society is coming to rely more and more on the road networks that play a key role in its safety and convenience. Let me express my deepest respect for all of you who are working tirelessly to fulfill the heavy demands of your duties to your respective communities. It is my sincere desire that this conference be a resounding success for everyone engaged in road management.*

## Traditional Japanese Arts Showcased

### PIARC Opening Ceremony Infused with Excitement

Yesterday's Opening Ceremony segued into performances rich in local culture and tradition from cold, snowy Hokkaido, Tohoku, and Hokuriku. Hokkaido's traditional single-stick drumming kicked off the program, followed by the stirring pluckings of the Tsugaru shamisen. Then came the Esashi-oiwake folksong of Hokkaido, after which there were dances by Sakata *maiko*, apprentice geishas from Yamagata Prefecture. The evening climaxed with Namahage demons from Akita Prefecture, who entered to a room filled with applause.



Sakata *maiko* dancing



Yosakoi Soran dancers



# Tea Ceremony and Koto Performance Add Japanese Flavor to Welcoming Reception

The *kagami-wari*, or ceremonial opening of the saké cask, marked the start of the Welcoming Reception. The attendees were served saké in a *masu* (square wooden cup) imprinted with the PIARC initials. The emcees for the reception, the husband and wife team of Mr. Kazuhiro Kimura and Mrs. Hanna Carmen, roused the crowd to a festive mood. As the party-goers relaxed and chatted, they enjoyed a menu featuring fare for which Hokkaido is famous, including potatoes, salmon, and scallops. The occasion also afforded visitors a chance to experience traditional aspects of Japan, such as tea ceremony and a koto performance. An impromptu photo session captured Namahage performers mingling with the crowd. The smiling faces were a sure sign that no language is needed for international goodwill.



Ribbon-cutting ceremony at the Hokkaido booth

Ribbon-cutting ceremony at the Hokuriku booth

## Sapporo Dome Offers 576 Booths Indoors and Outdoors

Following the Welcoming Reception, exhibition booths opened inside and outside of Sapporo Dome. Visitors from overseas walked through the exhibition, looking at different displays including GIS-based systems for managing snow-removal machinery, and car naviga-

tion technologies. The Hokuriku, Hokkaido, and Tohoku booths had their own ribbon-cutting ceremonies, accompanied by cultural performances. It was a great opportunity for each of these regions to promote its distinctiveness.



### Technical Presentation

#### Sustainability: Beyond the Buzzword

Since the 1992 Earth Summit, "sustainability" has become a key idea. It has proven slippery to define and achieve, but at yesterday's Technical Presentations on Sustainable Maintenance, experts addressed how road administrators might approach the concept and its realization.

Mr. Anders H.H. Jansson (Finland), Chairman of the PIARC C14, of-

fered a description of sustainable road maintenance as "an ecological responsible and economically efficient way to ensure that the road network answers to the demands on road transport function, taking into account the whole life cycle of the measures, materials and structures involved."

Mr. Dmitri N. Kavtaradze (Russian Federation), a member of the Ministry of Transport and the PIARC C14, was one of several speakers to emphasize comprehensive life-cycle assessment.

Mr. Tadayuki Tazaki (Japan), Chairman of the PIARC C17, described new efforts to keep roads in as good condition as possible in light of budgetary and environmental limitations.

Mr. Ulrich Schlup (Switzerland), President of SIRWEC and a C17 member, introduced three aspects of sustainability: ecological, economic, and social. He explained how these translate into criteria for winter road management.

Mr. Jansson concluded by saying, "sustainability means continuous learning," a sentiment that highlights the importance of the Congress.



# Yesterday's Shots



Mr. and Mrs. Michaud at the Welcoming Reception



## VIP guests



VIPs visiting booths



Yosakoi Soran dancers





Looking great in *happi* coats



Finns: "The saké is, great, and the ice cream is too. Finnish liquor is much stronger."



An Estonian couple: "Is this cup for saké made of cedar?"



Namahage



Tanzanian Construction Ministry member: "I wish I could bring home advanced Japanese technologies."



# Exhibition Short

## Sweden at the Scandinavian Booth



The Scandinavian booth represents five Northern lands: Sweden, Finland, Norway, Iceland, and Denmark. An eye-catching combination of their five national flags and the motto "Nordic Solutions" adorn their booth. For centuries, Nordic peoples have found solutions for surviving and thriving in harsh conditions of snow and ice. Through their continuous efforts against the elements, they have built communities that rank among the most advanced in the world.

One of the exhibits from Sweden is the RWiS (Road Weather Information System), the outcome of a collaboration of the National Road Administration of Sweden and four private companies. They embarked on this joint effort after the country recognized the great number of automobile accidents that had been caused by treacherous winter weather. Contending with the winter has incurred

significant monetary costs, not to mention the loss of life.

Snow and ice data are being collected by a system of cameras and data collection units stationed throughout the country. This system provides many benefits. For example, users can retrieve real-time information via Internet or cellular phone to understand the road conditions to their destinations. Another benefit is that the decision to apply anti-freezing agents and sand can be made in a timely fashion for effective accident prevention. Thanks to this system, the costs for road and accident management have dropped markedly. Currently, more than 1,000 people are taking advantage of this service.

Ms. Eva Tigerström, an official of the Swedish National Road Administration and project leader of the Scandinavian booth, asks, "Please do drop in at our booth. Our staff members will explain many interesting things and ideas using computers and brochures."



"It took us a year to prepare for this exhibit. Bringing everything to Sapporo was also a lot of work. But it's nothing, when I see you all enjoying our exhibition. We've brought you special token pins with a design of the Japanese and Swedish flags. Please do visit us!"

- Eva TIGARSTRÖM

## Hokkaido Booth

Tohoku, Hokuriku, and Hokkaido, the three snowiest regions in Japan, have booths side by side at the exhibition, vying for the visitor's attention. Hokkaido, the host of the Congress, is emphasizing its open spirit and geographic vastness by leaving more than half of its booth as open space. Attendees can lounge there and sample Hokkaido specialty products such as local wines and cheese. Mr.

Wataru Takahashi of the Hokkaido Development Bureau, one of the booth's designers, says: "Our aim is to give visitors an opportunity to relax. Stop by and enjoy yourself!" The large screen that sits in the middle wall shows images of Hokkaido, including seasonal changes and its residents. In addition, attendees will be introduced to this prefecture's nature, people, past, present, and challenges of roads.



"We have a bounty of local foods from communities all over Hokkaido. Please come and enjoy a gustatory change of pace. The presentation on the main screen is something we're proud of, too. We put a lot of work into it, and we're confident it shows. We look forward to seeing you!"

- Wataru TAKAHASHI





# In the Witching Hours, a Monstrous Hole Opens Downtown to Devour Snow

Snow- and Ice-Control Measures **VOL.2**

## Odori Sewage Treatment Plant

Six snow-melting facilities operate in Sapporo. By the year 2005, four additional facilities will be completed, for a total of ten. Most of them melt snow in winter using the heat of sewage and that of water in underground wastewater conduits and reservoirs, whose temperature is 12 to 13 °C.

One of these facilities is unknown even to most Sapporo citizens. Odori Sewage Treatment Plant, constructed under the carriageway of Hokudai Street in 1996, operates from 10 p.m. to 5 a.m. During these hours, snow-filled trucks arrive from various places and dump snow into a large inlet. Although the daily snow-melting capacity is just 1,400 m<sup>3</sup>, it is a great help for snow removal in the



Snow vanishes into the bowels of the city.

city center. In this facility there dwells a monster: rotors that break up the snow and send it to sewage pipes 2,000 mm in diameter. This facility

is not included in the Technical Visits held from the 29th to the 31st, but if you are interested, why not visit to see it in action?

### The Magic Number for Road Heating: 7-5-3

November 15 marks the date of the Shichi-go-san (7-5-3) festival for the health of boys aged 5 and girls aged 3 or 7.

It also happens that Sapporo's road heating is activated when two or more of the following "7-5-3" conditions are met:

- air temperature: -7°C
- wind velocity: 5 m/s
- snowfall: 3 cm/h

The road heating has a design coefficient of heat transmission for electric heating of 250 W/m<sup>2</sup>h, and a design heat flux for gas-heated water of 250 kcal/m<sup>2</sup>h.

## The Home Stretch for the "Tour de Hokkaido"

Road heating facilities that mainly employ electricity and gas-heated water are installed at approximately 680 sites on 61.5 km of road. Mt. Moiwa Scenic Road (photo), which leads to the Moiwa Observatory, was used in August 2001 as the last stage of the "Tour de Hokkaido." Imagine competitors from around the world cycle-sprinting up this two-km stretch whose gradient exceeds 8%. This road is installed with road heating for safe winter driving.



Mt. Moiwa Scenic Road

## How to Say It in Japanese

DAY 2

Make the most of your stay in the Land of the Rising Sun with these helpful phrases.

### Pleasantries



"How are you?" (*gen-kee dess ka*)

"I'm fine, thank you." (*Hi, gen-kee dess*)

"Thank you." (*ah ree gah toh*)

"You're welcome." (*doh ee-tah-she-mah-shtay*)

"I'm sorry." (*goh-men nah-sigh*)

"Excuse me." (*soo me mah sen*)



**Jan. 29 (Tue)**

- **Opening Session**  
9:30 a.m. ~ 12:00 p.m. Sapporo Dome
- **Oral Presentation**  
1:30 p.m. ~ 6:00 p.m. Sapporo Dome
- **Technical Visits**  
Departure 1:00 p.m. Sapporo Dome  
For more information on courses, refer to the Technical Visit Guidebook.
- **Accompanying Person's Tours**  
■ "Hands-on": Tours A-1 & A-3 depart 1:00 p.m.  
Tour A-2 departs 12:30 p.m.  
■ Sightseeing: Tours A-4, A-5 & A-6 depart 9:00 a.m.
- **Exhibition**  
Hours Indoor 9:30 a.m. ~ 7:00 p.m.  
Outdoor 10:00 a.m. ~ 4:00 p.m.  
Exhibition and demonstration of snow-removal machinery  
10:00 a.m. ~ 4:00 p.m. Sapporo Dome

**Jan. 30 (Wed)**

- **Special Session**  
9:00 a.m. ~ 12:00 p.m. Sapporo Dome
- **Poster Session**  
12:00 p.m. ~ 2:00 p.m. Sapporo Dome
- **Oral Presentation**  
2:00 p.m. ~ 5:20 p.m. Sapporo Dome
- **Technical Visits**  
T-1 departs 9:30 a.m. and 1:00 p.m.  
T-2 departs 9:30 a.m. and 1:00 p.m.  
T-3 ~ T-6 depart 1:00 p.m.; T-7 departs 1:00, 2:00, 3:00 & 4:00 p.m.  
For more information on courses, refer to the Technical Visit Guidebook.
- **Accompanying Person's Tours**  
■ "Hands-on": Tours A-1 & A-3 depart 1:00 p.m.; A-2, 12:30 p.m.  
■ Sightseeing: Tours A-4 ~ A-6 depart 9:00 a.m.
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Exhibition and demonstration of snow-removal machinery  
10:00 a.m. ~ 4:00 p.m. Sapporo Dome
- **Congress Dinner**  
7:30 p.m. ~ 9:30 p.m. Royton Sapporo

**Speakers' Corner**

Optional presentations by exhibiting corporations.

Each corporation has 20 minutes (15 minutes for presentation and 5 for Q & A).

The location is the "Aurora Vision" screen. **You do not need to go to the company's booth.**

**Presentation Schedule**

	Time	Corporation/Organization (Booth)
Jan 29	1 13:00 ~ 13:20	Iwane Laboratories (B-22)
	2 13:30 ~ 13:50	Sumitomo 3M Limited (A-4)
	3 14:00 ~ 14:20	AERO ASAHI CORPORATION (B-9)
	4 14:30 ~ 14:50	SEKISUI JUSHI CORPORATION (F-1)
	5 15:00 ~ 15:20	SHO-BOND CORPORATION (C-10)
	6 15:30 ~ 15:50	Mitsui Engineering & Shipbuilding Co., Ltd. (C-15)
	7 16:00 ~ 16:20	Tokyo Boeki Ltd. (G-5)
Jan 30	8 13:00 ~ 13:20	WEATHERNEWS INC (B-30)
	9 13:30 ~ 13:50	Docon Co., Ltd. (B-26)
	10 14:00 ~ 14:20	JAPAN ELECTRONICS INDUSTRY LTD (B-8)
	11 14:30 ~ 14:50	JMC Geothermal Engineering Co., Ltd. (I-4)
	12 15:00 ~ 15:20	JAPAN GROUNDWATER DEVELOPMENT CORPORATION (H-3)
	13 15:30 ~ 15:50	IWASAKI ELECTRIC CO., LTD. (F-16)
	14 16:00 ~ 16:20	JAPAN SPACE IMAGING CORPORATION (B-2)
Jan 31	15 10:00 ~ 10:20	SENECOM (A-9)
	16 10:30 ~ 10:50	Maeda Corporation (C-25)
	17 11:00 ~ 11:20	National Center for Atmospheric Research (A-5)
	18 11:30 ~ 11:50	Alaska Transportation Authority (guest)

**Desk & Restaurant Hours****Information Desk**

8:00 a.m. - 7:00 p.m., 29 Jan. (Tue.)  
8:00 a.m. - 7:00 p.m., 30 Jan. (Wed.)  
8:00 a.m. - 5:00 p.m., 31 Jan. (Thu.)

**Registration Desk  
(Congress Registration for Full-  
Registrants & Accompanying Persons)**

8:00 a.m. - 7:00 p.m., 29 Jan. (Tue.)  
8:00 a.m. - 7:00 p.m., 30 Jan. (Wed.)  
8:00 a.m. - 5:00 p.m., 31 Jan. (Thu.)

**Registration Desk  
(Registration for Accompanying  
Person's Tours)**

8:00 a.m. - 7:00 p.m., 29 Jan. (Tue.)  
8:00 a.m. - 1:00 p.m., 30 Jan. (Wed.)

**Registration Desk for Technical Visits**

8:00 a.m. - 7:00 p.m., 29 Jan. (Tue.)  
8:00 a.m. - 7:00 p.m., 30 Jan. (Wed.)  
8:00 a.m. - 9:20 a.m., 31 Jan. (Thu.)

**Testing Room Desk**

8:00 a.m. - 6:00 p.m., 29 Jan. (Tue.)  
8:00 a.m. - 6:00 p.m., 30 Jan. (Wed.)  
8:00 a.m. - 4:00 p.m., 31 Jan. (Thu.)

**Travel Desk (JTB Corp.)**

8:00 a.m. - 7:00 p.m., 29 Jan. (Tue.)  
8:00 a.m. - 7:00 p.m., 30 Jan. (Wed.)  
8:00 a.m. - 5:00 p.m., 31 Jan. (Thu.)

**Restaurants**

**Sports Stadium**  
Sapporo (1F) 11:00 a.m. - 7:00 p.m.  
Fan's Café (1F) 10:00 a.m. - 7:00 p.m.  
Bowbridge Café(3F) 10:00 a.m. - 6:00 p.m.