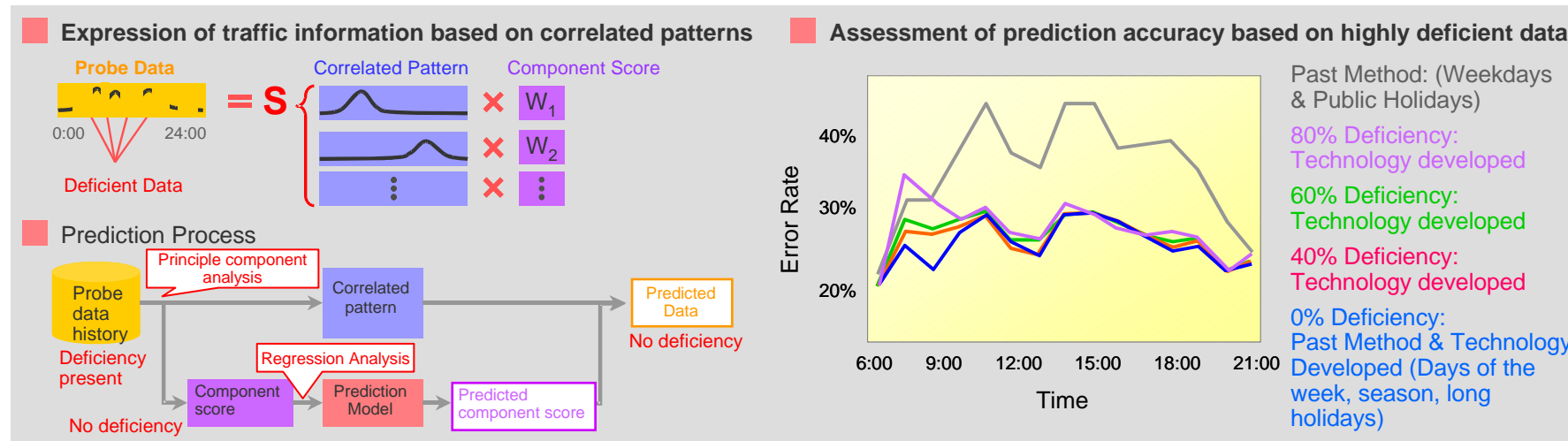


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Technology for improving the accuracy of traffic information prediction

- Enabling traffic prediction from sparse data of even 80% data deficiency using principle component analysis -



The Hitachi Research Laboratory (General Manager: Dr. Shigeru AZUHATA) of Hitachi, Ltd., has developed technology to improve the accuracy of traffic information prediction, used in optimal route detection or ETA prediction, for a wider area than current technology, even in the case of data deficiency such as amount of traffic. This technology uses a statistical method called principle component analysis, to organize the information received daily from probe cars^(*) into approximately 20 patterns, and combines it with calendar data to predict traffic information data. By using principle component analysis, the deficient data is compensated by correlation with actual measured data. Thus, even if the probe cars provide only sparse data with 80% deficiency, highly accurate predictions can still be obtained.

This research was presented together with other Hitachi telematic technologies, at the 12th World Congress on Intelligent Transport Systems, held in San Francisco, U.S.A. from 6th to 10th November 2005.

(*1) Probe car: Motor vehicles loaded with various sensors, such as speed, brakes and wiper operation sensors, to obtain information on driving and weather conditions. This information is combined with position and time data to provide traffic information. By statistically analyzing data from several vehicles, it is possible to obtain information from a wide area.