

## Spatial information analysis of park-and-ride-the case of analysis of parking lot around Naha monorail station-

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The number of users of Naha city monorail which opened aiming at the cancellation of serious traffic jam in 2003, has increased steadily and has established the position as public transportation in Okinawa. However, it is difficult to solve the traffic problem that uses only the monorail in Okinawa that the majority of population of 18 years old or more have driving license and their cars. Conversion from private car to public transportation facility slightly gives the user that accustomed to a comfortable movement using a car, a burden. But, the effect of the railway operated according to time is profitable for Okinawan people.

Public transportation and the private car also have the advantage and each disadvantage. A Dweller combines their life-style and their facilities location, and is spending the life in every day while balancing of advantage and disadvantage.

Then, It is evaluated that Park-and-Ride and Kiss-and-Ride that is the movement method of combining advantages of both is effective in the region where the motorization progresses.

When meeting and sending off person's presence and the number of possession of the private car a family are few, Kiss-and-Ride is often intended. But, in Okinawa where the number of the vehicle possession that occupies it to the license population exceeds 1.0, it is thought that park-and-ride where addition is not given at household member's life cycle is intended because it is in the environment for which each household member can use the private car.

However, the location of the parking lot in a traffic node such as the stations and bus stops is indispensable to Park-and-Ride, so the analysis of the traffic flow movement after the location of the parking lot around the station is understood promotes park-and-ride, and it is furthermore important in easing traffic jam

Then, in this research, at first, the data of parking facilities around the monorail station is made from the fieldwork. And the current state of Park-and-Ride in Okinawa is understood by quantitatively analyzing the parking data by using GIS. Additionally, the possibility of Park-and-Ride in the Naha city monorail is considered through the hearing investigation to the parking lot manager, the analysis of the land use around the station, and analysis of statistics related to transportation of the Okinawa prefecture and the station.